

AP-111

BINDER 2

3 of 5

**Annual Ground Water Monitoring Report:
Gallup Refinery – 2012**



Western Refining

Gallup, New Mexico

April 17, 2012

Appendix K



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

September 24, 2012

Cheryl Johnson

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-0231

FAX (505) 722-0210

RE: 3rd QTR 2012 GW

OrderNo.: 1208A02

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/22/2012 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. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. 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.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** GWM-1**Project:** 3rd QTR 2012 GW**Collection Date:** 8/21/2012 6:45:00 PM**Lab ID:** 1208A02-001**Matrix:** AQUEOUS**Received Date:** 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/23/2012 5:39:27 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/23/2012 5:39:27 PM
Surr: DNOP	138	79.5-166		%REC	1	8/23/2012 5:39:27 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1.2	0.25		mg/L	5	8/24/2012 6:21:40 PM
Surr: BFB	103	69.8-119		%REC	5	8/24/2012 6:21:40 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	3.0	0.50		mg/L	5	8/23/2012 11:03:31 AM
Chloride	1200	50		mg/L	100	8/23/2012 11:15:55 AM
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	8/22/2012 8:33:17 PM
Bromide	2.5	0.50		mg/L	5	8/22/2012 8:33:17 PM
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	8/22/2012 8:33:17 PM
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	8/23/2012 11:03:31 AM
Sulfate	140	2.5		mg/L	5	8/22/2012 8:33:17 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	1.1	0.010		mg/L	5	9/12/2012 11:42:26 AM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 11:24:13 AM
Calcium	320	5.0		mg/L	5	9/12/2012 11:42:26 AM
Chromium	ND	0.0060		mg/L	1	9/12/2012 11:24:13 AM
Copper	ND	0.0060		mg/L	1	9/12/2012 11:24:13 AM
Iron	6.8	0.40	*	mg/L	20	9/12/2012 3:35:08 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 11:24:13 AM
Magnesium	75	1.0		mg/L	1	9/12/2012 11:24:13 AM
Manganese	3.1	0.010	*	mg/L	5	9/12/2012 11:42:26 AM
Potassium	4.1	1.0		mg/L	1	9/12/2012 11:24:13 AM
Silver	ND	0.0050		mg/L	1	9/12/2012 11:24:13 AM
Sodium	990	20		mg/L	20	9/12/2012 3:35:08 PM
Zinc	0.030	0.010		mg/L	1	9/12/2012 11:24:13 AM
EPA METHOD 200.7: TOTAL METALS						Analyst: ELS
Barium	1.1	0.010		mg/L	5	9/5/2012 10:38:25 AM
Cadmium	ND	0.0020		mg/L	1	9/5/2012 10:35:01 AM
Chromium	ND	0.0060		mg/L	1	9/5/2012 10:35:01 AM
Copper	0.0091	0.0060		mg/L	1	9/5/2012 10:35:01 AM
Iron	9.8	0.40	*	mg/L	20	9/6/2012 11:26:00 AM
Lead	0.0056	0.0050		mg/L	1	9/5/2012 10:35:01 AM
Manganese	3.1	0.010	*	mg/L	5	9/5/2012 10:38:25 AM
Silver	ND	0.0050		mg/L	1	9/5/2012 10:35:01 AM
Zinc	0.019	0.010		mg/L	1	9/5/2012 10:35:01 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-1

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:45:00 PM

Lab ID: 1208A02-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.082	0.0050	*	mg/L	5	9/6/2012 4:19:26 PM
Selenium	0.0076	0.0050		mg/L	5	9/6/2012 4:19:26 PM
Uranium	0.0038	0.0010		mg/L	1	9/6/2012 2:05:31 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.090	0.0025	*	mg/L	2.5	9/6/2012 5:45:42 PM
Selenium	0.0075	0.0025		mg/L	2.5	9/6/2012 5:45:42 PM
Uranium	0.0052	0.0025		mg/L	2.5	9/13/2012 1:26:30 PM
EPA METHOD 245.1: MERCURY						Analyst: TES
Mercury	ND	0.00020		mg/L	1	9/11/2012 1:13:45 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Acenaphthylene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Aniline	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Anthracene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Azobenzene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Benz(a)anthracene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Benzo(a)pyrene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Benzoic acid	ND	20		µg/L	1	8/29/2012 2:49:51 AM
Benzyl alcohol	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/29/2012 2:49:51 AM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Butyl benzyl phthalate	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Carbazole	ND	10		µg/L	1	8/29/2012 2:49:51 AM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/29/2012 2:49:51 AM
4-Chloroaniline	ND	10		µg/L	1	8/29/2012 2:49:51 AM
2-Chloronaphthalene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
2-Chlorophenol	ND	10		µg/L	1	8/29/2012 2:49:51 AM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Chrysene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Di-n-butyl phthalate	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Di-n-octyl phthalate	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Dibenzofuran	ND	10		µg/L	1	8/29/2012 2:49:51 AM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 2:49:51 AM

Qualifiers:

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Analytical Report

Lab Order 1208A02

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CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-1

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:45:00 PM

Lab ID: 1208A02-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,3-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
1,4-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Diethyl phthalate	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Dimethyl phthalate	ND	10		µg/L	1	8/29/2012 2:49:51 AM
2,4-Dichlorophenol	ND	20		µg/L	1	8/29/2012 2:49:51 AM
2,4-Dimethylphenol	32	10		µg/L	1	8/29/2012 2:49:51 AM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/29/2012 2:49:51 AM
2,4-Dinitrophenol	ND	20		µg/L	1	8/29/2012 2:49:51 AM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Fluoranthene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Fluorene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Hexachlorobenzene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Hexachlorobutadiene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Hexachloroethane	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Isophorone	ND	10		µg/L	1	8/29/2012 2:49:51 AM
1-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
2-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
2-Methylphenol	ND	10		µg/L	1	8/29/2012 2:49:51 AM
3+4-Methylphenol	ND	10		µg/L	1	8/29/2012 2:49:51 AM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/29/2012 2:49:51 AM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/29/2012 2:49:51 AM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Naphthalene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
2-Nitroaniline	ND	10		µg/L	1	8/29/2012 2:49:51 AM
3-Nitroaniline	ND	10		µg/L	1	8/29/2012 2:49:51 AM
4-Nitroaniline	ND	20		µg/L	1	8/29/2012 2:49:51 AM
Nitrobenzene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
2-Nitrophenol	ND	10		µg/L	1	8/29/2012 2:49:51 AM
4-Nitrophenol	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Pentachlorophenol	ND	20		µg/L	1	8/29/2012 2:49:51 AM
Phenanthrene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Phenol	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Pyrene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Pyridine	ND	10		µg/L	1	8/29/2012 2:49:51 AM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/29/2012 2:49:51 AM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/29/2012 2:49:51 AM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/29/2012 2:49:51 AM
Surr: 2,4,6-Tribromophenol	97.0	44.2-126		%REC	1	8/29/2012 2:49:51 AM

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Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-1

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:45:00 PM

Lab ID: 1208A02-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorobiphenyl	89.0	37-114		%REC	1	8/29/2012 2:49:51 AM
Surr: 2-Fluorophenol	61.1	23.4-98		%REC	1	8/29/2012 2:49:51 AM
Surr: 4-Terphenyl-d14	63.4	41.3-116		%REC	1	8/29/2012 2:49:51 AM
Surr: Nitrobenzene-d5	84.4	39.5-118		%REC	1	8/29/2012 2:49:51 AM
Surr: Phenol-d5	51.8	20.9-95.9		%REC	1	8/29/2012 2:49:51 AM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	7.8	1.0		µg/L	1	8/25/2012 5:30:59 AM
Toluene	2.4	1.0		µg/L	1	8/25/2012 5:30:59 AM
Ethylbenzene	3.5	1.0		µg/L	1	8/25/2012 5:30:59 AM
Methyl tert-butyl ether (MTBE)	44	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,2,4-Trimethylbenzene	9.7	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,3,5-Trimethylbenzene	1.9	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Naphthalene	ND	2.0		µg/L	1	8/25/2012 5:30:59 AM
1-Methylnaphthalene	13	4.0		µg/L	1	8/25/2012 5:30:59 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/25/2012 5:30:59 AM
Acetone	ND	10		µg/L	1	8/25/2012 5:30:59 AM
Bromobenzene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Bromodichloromethane	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Bromoform	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Bromomethane	ND	3.0		µg/L	1	8/25/2012 5:30:59 AM
2-Butanone	ND	10		µg/L	1	8/25/2012 5:30:59 AM
Carbon disulfide	ND	10		µg/L	1	8/25/2012 5:30:59 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Chlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Chloroethane	ND	2.0		µg/L	1	8/25/2012 5:30:59 AM
Chloroform	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Chloromethane	ND	3.0		µg/L	1	8/25/2012 5:30:59 AM
2-Chlorotoluene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
4-Chlorotoluene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
cis-1,2-DCE	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/25/2012 5:30:59 AM
Dibromochloromethane	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Dibromomethane	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM

Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-1

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:45:00 PM

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Matrix: AQUEOUS

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
1,1-Dichloroethene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/25/2012 5:30:59 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
2-Hexanone	ND	10		µg/L	1	8/25/2012 5:30:59 AM
Isopropylbenzene	1.1	1.0		µg/L	1	8/25/2012 5:30:59 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/25/2012 5:30:59 AM
Methylene Chloride	ND	3.0		µg/L	1	8/25/2012 5:30:59 AM
n-Butylbenzene	ND	3.0		µg/L	1	8/25/2012 5:30:59 AM
n-Propylbenzene	2.2	1.0		µg/L	1	8/25/2012 5:30:59 AM
sec-Butylbenzene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Styrene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
tert-Butylbenzene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/25/2012 5:30:59 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
trans-1,2-DCE	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/25/2012 5:30:59 AM
Vinyl chloride	ND	1.0		µg/L	1	8/25/2012 5:30:59 AM
Xylenes, Total	15	1.5		µg/L	1	8/25/2012 5:30:59 AM
Surr: 1,2-Dichloroethane-d4	103	70-130		%REC	1	8/25/2012 5:30:59 AM
Surr: 4-Bromofluorobenzene	95.4	70-130		%REC	1	8/25/2012 5:30:59 AM
Surr: Dibromofluoromethane	100	70-130		%REC	1	8/25/2012 5:30:59 AM
Surr: Toluene-d8	98.4	70-130		%REC	1	8/25/2012 5:30:59 AM

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Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-2

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:35:00 PM

Lab ID: 1208A02-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/23/2012 6:01:26 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/23/2012 6:01:26 PM
Surr: DNOP	137	79.5-166		%REC	1	8/23/2012 6:01:26 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.25		mg/L	5	8/24/2012 6:51:53 PM
Surr: BFB	102	69.8-119		%REC	5	8/24/2012 6:51:53 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	2.8	0.50		mg/L	5	8/23/2012 11:28:20 AM
Chloride	1200	50		mg/L	100	8/23/2012 12:17:59 PM
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	8/22/2012 10:49:47 PM
Bromide	3.4	0.50		mg/L	5	8/22/2012 10:49:47 PM
Nitrogen, Nitrate (As N)	14	0.50	*	mg/L	5	8/22/2012 10:49:47 PM
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	8/23/2012 11:28:20 AM
Sulfate	1400	25		mg/L	50	8/23/2012 11:40:46 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.033	0.0020		mg/L	1	9/12/2012 11:46:08 AM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 11:46:08 AM
Calcium	430	5.0		mg/L	5	9/12/2012 11:50:07 AM
Chromium	ND	0.0060		mg/L	1	9/12/2012 11:46:08 AM
Copper	0.041	0.0060		mg/L	1	9/12/2012 11:46:08 AM
Iron	0.13	0.020		mg/L	1	9/12/2012 11:46:08 AM
Lead	0.012	0.0050		mg/L	1	9/12/2012 11:46:08 AM
Magnesium	82	1.0		mg/L	1	9/12/2012 11:46:08 AM
Manganese	0.55	0.0020	*	mg/L	1	9/12/2012 11:46:08 AM
Potassium	4.2	1.0		mg/L	1	9/12/2012 11:46:08 AM
Silver	ND	0.0050		mg/L	1	9/12/2012 3:38:54 PM
Sodium	1300	20		mg/L	20	9/12/2012 3:42:54 PM
Zinc	0.039	0.010		mg/L	1	9/12/2012 11:46:08 AM
EPA METHOD 200.7: TOTAL METALS						Analyst: ELS
Barium	0.040	0.0020		mg/L	1	9/5/2012 10:41:37 AM
Cadmium	ND	0.0020		mg/L	1	9/5/2012 10:41:37 AM
Chromium	ND	0.0060		mg/L	1	9/5/2012 10:41:37 AM
Copper	0.045	0.0060		mg/L	1	9/5/2012 10:41:37 AM
Iron	0.44	0.020	*	mg/L	1	9/5/2012 10:41:37 AM
Lead	0.0071	0.0050		mg/L	1	9/5/2012 10:41:37 AM
Manganese	0.45	0.0020	*	mg/L	1	9/5/2012 10:41:37 AM
Silver	ND	0.0050		mg/L	1	9/5/2012 10:41:37 AM
Zinc	0.025	0.010		mg/L	1	9/5/2012 10:41:37 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-2

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:35:00 PM

Lab ID: 1208A02-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0069	0.0050		mg/L	5	9/6/2012 4:23:22 PM
Selenium	0.012	0.0050		mg/L	5	9/6/2012 4:23:22 PM
Uranium	0.12	0.0050	*	mg/L	5	9/6/2012 4:23:22 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.0066	0.0025		mg/L	2.5	9/6/2012 5:47:34 PM
Selenium	0.0099	0.0025		mg/L	2.5	9/6/2012 5:47:34 PM
Uranium	0.12	0.0050	*	mg/L	5	9/13/2012 1:28:22 PM
EPA METHOD 245.1: MERCURY						Analyst: TES
Mercury	ND	0.00020		mg/L	1	9/11/2012 1:15:32 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Acenaphthylene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Aniline	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Anthracene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Azobenzene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Benz(a)anthracene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Benzo(a)pyrene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Benzoic acid	ND	20		µg/L	1	8/29/2012 3:19:15 AM
Benzyl alcohol	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/29/2012 3:19:15 AM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Butyl benzyl phthalate	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Carbazole	ND	10		µg/L	1	8/29/2012 3:19:15 AM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/29/2012 3:19:15 AM
4-Chloroaniline	ND	10		µg/L	1	8/29/2012 3:19:15 AM
2-Chloronaphthalene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
2-Chlorophenol	ND	10		µg/L	1	8/29/2012 3:19:15 AM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Chrysene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Di-n-butyl phthalate	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Di-n-octyl phthalate	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Dibenzofuran	ND	10		µg/L	1	8/29/2012 3:19:15 AM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 3:19:15 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-2

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:35:00 PM

Lab ID: 1208A02-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,3-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
1,4-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Diethyl phthalate	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Dimethyl phthalate	ND	10		µg/L	1	8/29/2012 3:19:15 AM
2,4-Dichlorophenol	ND	20		µg/L	1	8/29/2012 3:19:15 AM
2,4-Dimethylphenol	ND	10		µg/L	1	8/29/2012 3:19:15 AM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/29/2012 3:19:15 AM
2,4-Dinitrophenol	ND	20		µg/L	1	8/29/2012 3:19:15 AM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Fluoranthene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Fluorene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Hexachlorobenzene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Hexachlorobutadiene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Hexachloroethane	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Isophorone	ND	10		µg/L	1	8/29/2012 3:19:15 AM
1-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
2-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
2-Methylphenol	ND	10		µg/L	1	8/29/2012 3:19:15 AM
3+4-Methylphenol	ND	10		µg/L	1	8/29/2012 3:19:15 AM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/29/2012 3:19:15 AM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/29/2012 3:19:15 AM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Naphthalene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
2-Nitroaniline	ND	10		µg/L	1	8/29/2012 3:19:15 AM
3-Nitroaniline	ND	10		µg/L	1	8/29/2012 3:19:15 AM
4-Nitroaniline	ND	20		µg/L	1	8/29/2012 3:19:15 AM
Nitrobenzene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
2-Nitrophenol	ND	10		µg/L	1	8/29/2012 3:19:15 AM
4-Nitrophenol	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Pentachlorophenol	ND	20		µg/L	1	8/29/2012 3:19:15 AM
Phenanthrene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Phenol	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Pyrene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Pyridine	ND	10		µg/L	1	8/29/2012 3:19:15 AM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/29/2012 3:19:15 AM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/29/2012 3:19:15 AM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/29/2012 3:19:15 AM
Surr: 2,4,6-Tribromophenol	91.3	44.2-126		%REC	1	8/29/2012 3:19:15 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-2

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:35:00 PM

Lab ID: 1208A02-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorobiphenyl	90.4	37-114		%REC	1	8/29/2012 3:19:15 AM
Surr: 2-Fluorophenol	51.9	23.4-98		%REC	1	8/29/2012 3:19:15 AM
Surr: 4-Terphenyl-d14	67.2	41.3-116		%REC	1	8/29/2012 3:19:15 AM
Surr: Nitrobenzene-d5	91.9	39.5-118		%REC	1	8/29/2012 3:19:15 AM
Surr: Phenol-d5	50.5	20.9-95.9		%REC	1	8/29/2012 3:19:15 AM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Toluene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Ethylbenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Methyl tert-butyl ether (MTBE)	2.6	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Naphthalene	ND	2.0		µg/L	1	8/25/2012 5:59:12 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/25/2012 5:59:12 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/25/2012 5:59:12 AM
Acetone	ND	10		µg/L	1	8/25/2012 5:59:12 AM
Bromobenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Bromodichloromethane	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Bromoform	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Bromomethane	ND	3.0		µg/L	1	8/25/2012 5:59:12 AM
2-Butanone	ND	10		µg/L	1	8/25/2012 5:59:12 AM
Carbon disulfide	ND	10		µg/L	1	8/25/2012 5:59:12 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Chlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Chloroethane	ND	2.0		µg/L	1	8/25/2012 5:59:12 AM
Chloroform	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Chloromethane	ND	3.0		µg/L	1	8/25/2012 5:59:12 AM
2-Chlorotoluene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
4-Chlorotoluene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
cis-1,2-DCE	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/25/2012 5:59:12 AM
Dibromochloromethane	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Dibromomethane	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-2

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:35:00 PM

Lab ID: 1208A02-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
1,1-Dichloroethene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/25/2012 5:59:12 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
2-Hexanone	ND	10		µg/L	1	8/25/2012 5:59:12 AM
Isopropylbenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/25/2012 5:59:12 AM
Methylene Chloride	ND	3.0		µg/L	1	8/25/2012 5:59:12 AM
n-Butylbenzene	ND	3.0		µg/L	1	8/25/2012 5:59:12 AM
n-Propylbenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
sec-Butylbenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Styrene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
tert-Butylbenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/25/2012 5:59:12 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
trans-1,2-DCE	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/25/2012 5:59:12 AM
Vinyl chloride	ND	1.0		µg/L	1	8/25/2012 5:59:12 AM
Xylenes, Total	ND	1.5		µg/L	1	8/25/2012 5:59:12 AM
Surr: 1,2-Dichloroethane-d4	98.4	70-130		%REC	1	8/25/2012 5:59:12 AM
Surr: 4-Bromofluorobenzene	96.9	70-130		%REC	1	8/25/2012 5:59:12 AM
Surr: Dibromofluoromethane	100	70-130		%REC	1	8/25/2012 5:59:12 AM
Surr: Toluene-d8	100	70-130		%REC	1	8/25/2012 5:59:12 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-3

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:15:00 PM

Lab ID: 1208A02-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/23/2012 6:23:18 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/23/2012 6:23:18 PM
Surr: DNOP	135	79.5-166		%REC	1	8/23/2012 6:23:18 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.25		mg/L	5	8/24/2012 7:22:05 PM
Surr: BFB	103	69.8-119		%REC	5	8/24/2012 7:22:05 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	4.9	0.50	*	mg/L	5	9/4/2012 5:44:24 PM
Chloride	1200	50		mg/L	100	8/23/2012 12:30:24 PM
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	8/22/2012 11:14:37 PM
Bromide	2.5	0.50		mg/L	5	8/22/2012 11:14:37 PM
Nitrogen, Nitrate (As N)	43	2.0	*	mg/L	20	8/23/2012 12:04:15 AM
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	8/23/2012 12:04:15 AM
Sulfate	1500	25		mg/L	50	8/23/2012 12:42:48 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.029	0.0020		mg/L	1	9/12/2012 11:53:55 AM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 11:53:55 AM
Calcium	390	5.0		mg/L	5	9/12/2012 11:57:46 AM
Chromium	ND	0.0060		mg/L	1	9/12/2012 11:53:55 AM
Copper	0.23	0.0060		mg/L	1	9/12/2012 11:53:55 AM
Iron	0.88	0.020	*	mg/L	1	9/12/2012 11:53:55 AM
Lead	0.063	0.0050	*	mg/L	1	9/12/2012 11:53:55 AM
Magnesium	75	1.0		mg/L	1	9/12/2012 11:53:55 AM
Manganese	1.7	0.010	*	mg/L	5	9/12/2012 11:57:46 AM
Potassium	4.9	1.0		mg/L	1	9/12/2012 11:53:55 AM
Silver	ND	0.0050		mg/L	1	9/12/2012 3:46:40 PM
Sodium	1200	20		mg/L	20	9/12/2012 3:50:33 PM
Zinc	0.46	0.010		mg/L	1	9/12/2012 11:53:55 AM
EPA METHOD 200.7: TOTAL METALS						Analyst: ELS
Barium	0.040	0.0020		mg/L	1	9/5/2012 10:49:11 AM
Cadmium	ND	0.0020		mg/L	1	9/5/2012 10:49:11 AM
Chromium	ND	0.0060		mg/L	1	9/5/2012 10:49:11 AM
Copper	0.22	0.0060		mg/L	1	9/5/2012 10:49:11 AM
Iron	1.7	0.10	*	mg/L	5	9/5/2012 10:52:19 AM
Lead	0.070	0.0050	*	mg/L	1	9/5/2012 10:49:11 AM
Manganese	1.0	0.0020	*	mg/L	1	9/5/2012 10:49:11 AM
Silver	ND	0.0050		mg/L	1	9/5/2012 10:49:11 AM
Zinc	0.47	0.010		mg/L	1	9/5/2012 10:49:11 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD

Qualifiers: * Value exceeds Maximum Contaminant Level.
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH greater than 2
 RL Reporting Detection Limit

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-3

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:15:00 PM

Lab ID: 1208A02-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Quai	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	ND	0.0050		mg/L	5	9/6/2012 4:27:18 PM
Selenium	0.0099	0.0050		mg/L	5	9/6/2012 4:27:18 PM
Uranium	0.066	0.0050	*	mg/L	5	9/6/2012 4:27:18 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.0033	0.0025		mg/L	2.5	9/6/2012 5:49:26 PM
Selenium	0.0092	0.0025		mg/L	2.5	9/6/2012 5:49:26 PM
Uranium	0.067	0.0025	*	mg/L	2.5	9/13/2012 1:30:14 PM
EPA METHOD 245.1: MERCURY						Analyst: TES
Mercury	ND	0.00020		mg/L	1	9/11/2012 1:17:24 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Acenaphthylene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Aniline	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Anthracene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Azobenzene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Benz(a)anthracene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Benzo(a)pyrene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Benzoic acid	ND	20		µg/L	1	8/29/2012 3:48:37 AM
Benzyl alcohol	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/29/2012 3:48:37 AM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Butyl benzyl phthalate	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Carbazole	ND	10		µg/L	1	8/29/2012 3:48:37 AM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/29/2012 3:48:37 AM
4-Chloroaniline	ND	10		µg/L	1	8/29/2012 3:48:37 AM
2-Chloronaphthalene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
2-Chlorophenol	ND	10		µg/L	1	8/29/2012 3:48:37 AM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Chrysene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Di-n-butyl phthalate	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Di-n-octyl phthalate	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Dibenzofuran	ND	10		µg/L	1	8/29/2012 3:48:37 AM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 3:48:37 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-3

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:15:00 PM

Lab ID: 1208A02-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,3-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
1,4-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Diethyl phthalate	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Dimethyl phthalate	ND	10		µg/L	1	8/29/2012 3:48:37 AM
2,4-Dichlorophenol	ND	20		µg/L	1	8/29/2012 3:48:37 AM
2,4-Dimethylphenol	ND	10		µg/L	1	8/29/2012 3:48:37 AM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/29/2012 3:48:37 AM
2,4-Dinitrophenol	ND	20		µg/L	1	8/29/2012 3:48:37 AM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Fluoranthene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Fluorene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Hexachlorobenzene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Hexachlorobutadiene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Hexachloroethane	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Isophorone	ND	10		µg/L	1	8/29/2012 3:48:37 AM
1-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
2-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
2-Methylphenol	ND	10		µg/L	1	8/29/2012 3:48:37 AM
3+4-Methylphenol	ND	10		µg/L	1	8/29/2012 3:48:37 AM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/29/2012 3:48:37 AM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/29/2012 3:48:37 AM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Naphthalene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
2-Nitroaniline	ND	10		µg/L	1	8/29/2012 3:48:37 AM
3-Nitroaniline	ND	10		µg/L	1	8/29/2012 3:48:37 AM
4-Nitroaniline	ND	20		µg/L	1	8/29/2012 3:48:37 AM
Nitrobenzene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
2-Nitrophenol	ND	10		µg/L	1	8/29/2012 3:48:37 AM
4-Nitrophenol	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Pentachlorophenol	ND	20		µg/L	1	8/29/2012 3:48:37 AM
Phenanthrene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Phenol	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Pyrene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Pyridine	ND	10		µg/L	1	8/29/2012 3:48:37 AM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/29/2012 3:48:37 AM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/29/2012 3:48:37 AM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/29/2012 3:48:37 AM
Surr: 2,4,6-Tribromophenol	96.0	44.2-126		%REC	1	8/29/2012 3:48:37 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-3

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:15:00 PM

Lab ID: 1208A02-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorobiphenyl	94.2	37-114		%REC	1	8/29/2012 3:48:37 AM
Surr: 2-Fluorophenol	57.1	23.4-98		%REC	1	8/29/2012 3:48:37 AM
Surr: 4-Terphenyl-d14	75.6	41.3-116		%REC	1	8/29/2012 3:48:37 AM
Surr: Nitrobenzene-d5	98.8	39.5-118		%REC	1	8/29/2012 3:48:37 AM
Surr: Phenol-d5	54.4	20.9-95.9		%REC	1	8/29/2012 3:48:37 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Toluene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Ethylbenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Methyl tert-butyl ether (MTBE)	1.5	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Naphthalene	ND	2.0		µg/L	1	8/30/2012 7:00:27 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/30/2012 7:00:27 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/30/2012 7:00:27 PM
Acetone	ND	10		µg/L	1	8/30/2012 7:00:27 PM
Bromobenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Bromoform	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Bromomethane	ND	3.0		µg/L	1	8/30/2012 7:00:27 PM
2-Butanone	ND	10		µg/L	1	8/30/2012 7:00:27 PM
Carbon disulfide	ND	10		µg/L	1	8/30/2012 7:00:27 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Chlorobenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Chloroethane	ND	2.0		µg/L	1	8/30/2012 7:00:27 PM
Chloroform	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Chloromethane	ND	3.0		µg/L	1	8/30/2012 7:00:27 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/30/2012 7:00:27 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Dibromomethane	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: GWM-3

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 6:15:00 PM

Lab ID: 1208A02-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,1-Dichloroethene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/30/2012 7:00:27 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
2-Hexanone	ND	10		µg/L	1	8/30/2012 7:00:27 PM
Isopropylbenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/30/2012 7:00:27 PM
Methylene Chloride	ND	3.0		µg/L	1	8/30/2012 7:00:27 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/30/2012 7:00:27 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Styrene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/30/2012 7:00:27 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/30/2012 7:00:27 PM
Vinyl chloride	ND	1.0		µg/L	1	8/30/2012 7:00:27 PM
Xylenes, Total	ND	1.5		µg/L	1	8/30/2012 7:00:27 PM
Surr: 1,2-Dichloroethane-d4	83.4	70-130		%REC	1	8/30/2012 7:00:27 PM
Surr: 4-Bromofluorobenzene	86.3	70-130		%REC	1	8/30/2012 7:00:27 PM
Surr: Dibromofluoromethane	90.5	70-130		%REC	1	8/30/2012 7:00:27 PM
Surr: Toluene-d8	84.9	70-130		%REC	1	8/30/2012 7:00:27 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 7:00:00 PM

Lab ID: 1208A02-004

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Toluene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Ethylbenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Naphthalene	ND	2.0		µg/L	1	8/30/2012 8:23:49 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/30/2012 8:23:49 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/30/2012 8:23:49 PM
Acetone	ND	10		µg/L	1	8/30/2012 8:23:49 PM
Bromobenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Bromoform	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Bromomethane	ND	3.0		µg/L	1	8/30/2012 8:23:49 PM
2-Butanone	ND	10		µg/L	1	8/30/2012 8:23:49 PM
Carbon disulfide	ND	10		µg/L	1	8/30/2012 8:23:49 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Chlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Chloroethane	ND	2.0		µg/L	1	8/30/2012 8:23:49 PM
Chloroform	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Chloromethane	ND	3.0		µg/L	1	8/30/2012 8:23:49 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/30/2012 8:23:49 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Dibromomethane	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/30/2012 8:23:49 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
2-Hexanone	ND	10		µg/L	1	8/30/2012 8:23:49 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 GW

Collection Date: 8/21/2012 7:00:00 PM

Lab ID: 1208A02-004

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Isopropylbenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/30/2012 8:23:49 PM
Methylene Chloride	ND	3.0		µg/L	1	8/30/2012 8:23:49 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/30/2012 8:23:49 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Styrene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/30/2012 8:23:49 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/30/2012 8:23:49 PM
Vinyl chloride	ND	1.0		µg/L	1	8/30/2012 8:23:49 PM
Xylenes, Total	ND	1.5		µg/L	1	8/30/2012 8:23:49 PM
Surr: 1,2-Dichloroethane-d4	88.9	70-130		%REC	1	8/30/2012 8:23:49 PM
Surr: 4-Bromofluorobenzene	87.2	70-130		%REC	1	8/30/2012 8:23:49 PM
Surr: Dibromofluoromethane	82.9	70-130		%REC	1	8/30/2012 8:23:49 PM
Surr: Toluene-d8	85.7	70-130		%REC	1	8/30/2012 8:23:49 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 3rd QTR 2012 GW

Collection Date:

Lab ID: 1208A02-005

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/24/2012 7:52:16 PM
Surr: BFB	114	69.8-119		%REC	1	8/24/2012 7:52:16 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Toluene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Ethylbenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Naphthalene	ND	2.0		µg/L	1	8/30/2012 8:51:38 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/30/2012 8:51:38 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/30/2012 8:51:38 PM
Acetone	ND	10		µg/L	1	8/30/2012 8:51:38 PM
Bromobenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Bromoform	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Bromomethane	ND	3.0		µg/L	1	8/30/2012 8:51:38 PM
2-Butanone	ND	10		µg/L	1	8/30/2012 8:51:38 PM
Carbon disulfide	ND	10		µg/L	1	8/30/2012 8:51:38 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Chlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Chloroethane	ND	2.0		µg/L	1	8/30/2012 8:51:38 PM
Chloroform	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Chloromethane	ND	3.0		µg/L	1	8/30/2012 8:51:38 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/30/2012 8:51:38 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Dibromomethane	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208A02

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 3rd QTR 2012 GW

Collection Date:

Lab ID: 1208A02-005

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
2,2-Dichloropropane	ND	2.0		µg/L	1	8/30/2012 8:51:38 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
2-Hexanone	ND	10		µg/L	1	8/30/2012 8:51:38 PM
Isopropylbenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/30/2012 8:51:38 PM
Methylene Chloride	ND	3.0		µg/L	1	8/30/2012 8:51:38 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/30/2012 8:51:38 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Styrene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/30/2012 8:51:38 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/30/2012 8:51:38 PM
Vinyl chloride	ND	1.0		µg/L	1	8/30/2012 8:51:38 PM
Xylenes, Total	ND	1.5		µg/L	1	8/30/2012 8:51:38 PM
Surr: 1,2-Dichloroethane-d4	88.9	70-130		%REC	1	8/30/2012 8:51:38 PM
Surr: 4-Bromofluorobenzene	85.1	70-130		%REC	1	8/30/2012 8:51:38 PM
Surr: Dibromofluoromethane	94.4	70-130		%REC	1	8/30/2012 8:51:38 PM
Surr: Toluene-d8	85.8	70-130		%REC	1	8/30/2012 8:51:38 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	155926	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								
Lead	ND	0.0050								
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:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	155927	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	0.51	0.0020	0.5000	0	101	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.50	0.020	0.5000	0.002590	99.7	85	115			
Lead	0.50	0.0050	0.5000	0	100	85	115			
Magnesium	53	1.0	50.00	0	106	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	52	1.0	50.00	0	105	85	115			
Zinc	0.49	0.010	0.5000	0	99.0	85	115			

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156329	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.65	0.0020	0.5000	0.1271	105	70	130			
Cadmium	0.53	0.0020	0.5000	0	105	70	130			
Chromium	0.52	0.0060	0.5000	0.001070	103	70	130			
Copper	0.56	0.0060	0.5000	0	112	70	130			

Notes:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	1208996-003DMS		SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC		Batch ID: R5457		RunNo: 5457					
Prep Date:			Analysis Date: 9/12/2012		SeqNo: 156329		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.56	0.020	0.5000	0.04012	104	70	130			
Lead	0.51	0.0050	0.5000	0	102	70	130			
Magnesium	69	1.0	50.00	13.55	112	70	130			
Manganese	0.53	0.0020	0.5000	0.0006300	106	70	130			
Potassium	56	1.0	50.00	2.284	108	70	130			
Silver	0.10	0.0050	0.1000	0	103	70	130			
Sodium	83	1.0	50.00	27.29	111	70	130			
Zinc	0.52	0.010	0.5000	0.01358	101	70	130			

Sample ID	1208996-003DMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457				
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156330		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Barium	0.63	0.0020	0.5000	0.1271	101	70	130	3.05	20		
Cadmium	0.51	0.0020	0.5000	0	102	70	130	2.73	20		
Chromium	0.50	0.0060	0.5000	0.001070	99.7	70	130	3.48	20		
Copper	0.55	0.0060	0.5000	0	110	70	130	1.68	20		
Iron	0.56	0.020	0.5000	0.04012	103	70	130	0.424	20		
Lead	0.50	0.0050	0.5000	0	99.2	70	130	2.65	20		
Magnesium	68	1.0	50.00	13.55	109	70	130	1.63	20		
Manganese	0.52	0.0020	0.5000	0.0006300	103	70	130	2.93	20		
Potassium	55	1.0	50.00	2.284	106	70	130	1.53	20		
Silver	0.099	0.0050	0.1000	0	99.4	70	130	3.30	20		
Sodium	82	1.0	50.00	27.29	109	70	130	0.982	20		
Zinc	0.50	0.010	0.5000	0.01358	96.5	70	130	4.24	20		

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156332	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	370	5.0	250.0	66.77	122	70	130			

Sample ID	1208996-003DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156333	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	330	5.0	250.0	66.77	106	70	130	11.7	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156417	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								
Lead	ND	0.0050								
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:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156418	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.001060	97.0	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.3	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	95.5	85	115			
Copper	0.52	0.0060	0.5000	0	104	85	115			
Iron	0.50	0.020	0.5000	0.003080	99.0	85	115			
Lead	0.47	0.0050	0.5000	0	94.1	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Potassium	49	1.0	50.00	0	98.4	85	115			
Silver	0.10	0.0050	0.1000	0.001260	98.6	85	115			
Sodium	51	1.0	50.00	0	103	85	115			
Zinc	0.46	0.010	0.5000	0	92.6	85	115			

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156420	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0.007580	89.5	70	130			
Cadmium	0.46	0.0020	0.5000	0.001310	92.5	70	130			
Chromium	0.44	0.0060	0.5000	0	88.1	70	130			
Copper	0.55	0.0060	0.5000	0.04934	99.8	70	130			

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156420	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.47	0.020	0.5000	0.003920	92.6	70	130			
Magnesium	78	1.0	50.00	28.77	99.1	70	130			
Potassium	50	1.0	50.00	1.179	97.1	70	130			
Silver	0.093	0.0050	0.1000	0	93.0	70	130			
Sodium	60	1.0	50.00	9.466	102	70	130			
Zinc	0.90	0.010	0.5000	0.5237	75.6	70	130			

Sample ID	1208A83-002AMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156421	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0.007580	88.6	70	130	0.945	20	
Cadmium	0.46	0.0020	0.5000	0.001310	91.1	70	130	1.54	20	
Chromium	0.43	0.0060	0.5000	0	86.4	70	130	1.96	20	
Copper	0.55	0.0060	0.5000	0.04934	99.3	70	130	0.477	20	
Iron	0.46	0.020	0.5000	0.003920	91.1	70	130	1.62	20	
Magnesium	78	1.0	50.00	28.77	98.2	70	130	0.598	20	
Potassium	49	1.0	50.00	1.179	96.4	70	130	0.773	20	
Silver	0.093	0.0050	0.1000	0	93.1	70	130	0.150	20	
Sodium	60	1.0	50.00	9.466	101	70	130	0.803	20	
Zinc	0.89	0.010	0.5000	0.5237	72.8	70	130	1.59	20	

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156423	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130			
Manganese	4.3	0.010	2.500	1.779	99.4	70	130			

Sample ID	1208A83-002AMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156424	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130	0.395	20	
Manganese	4.3	0.010	2.500	1.779	102	70	130	1.46	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	MB-3476		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	3476		RunNo:	5311			
Prep Date:	8/24/2012		Analysis Date:	9/5/2012		SeqNo:	151201		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								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-3476		SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW		Batch ID:	3476		RunNo:	5311			
Prep Date:	8/24/2012		Analysis Date:	9/5/2012		SeqNo:	151202		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			
Barium	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	101	85	115			
Copper	0.52	0.0060	0.5000	0	103	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Lead	0.51	0.0050	0.5000	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.3	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.50	0.010	0.5000	0	99.8	85	115			

Notes:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	MB-3476	SampType:	MBLK	TestCode:	EPA 200.8: Metals					
Client ID:	PBW	Batch ID:	3476	RunNo:	5508					
Prep Date:	8/24/2012	Analysis Date:	9/13/2012	SeqNo:	157390	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0025								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	1208476-008EMS			SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	BatchQC		Batch ID:		R5350		RunNo:	5350			
Prep Date:			Analysis Date:		9/6/2012		SeqNo:	152349		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.029	0.0010	0.02500	0	117	70	130				

Sample ID	1208654-002AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152351		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.16	0.0050	0.1250	0.03618	99.4	70	130				

Sample ID	1208944-008AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152364		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0.0002792	97.9	70	130				
Selenium	0.029	0.0010	0.02500	0.004276	97.4	70	130				
Uranium	0.034	0.0010	0.02500	0.008442	103	70	130				

Sample ID	1208A83-002AMS		SampType: MS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	BatchQC		Batch ID: R5350		RunNo: 5350					
Prep Date:			Analysis Date: 9/6/2012		SeqNo: 152381		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.7	70	130			
Selenium	0.026	0.0010	0.02500	0.001591	98.2	70	130			
Uranium	0.027	0.0010	0.02500	0.0009453	103	70	130			

Sample ID	1208B35-001DMS		SampType: MS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	BatchQC		Batch ID: R5350		RunNo: 5350					
Prep Date:			Analysis Date: 9/6/2012		SeqNo: 152398		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.12	0.0050	0.1250	0.003821	93.6	70	130			
Selenium	0.11	0.0050	0.1250	0.007249	83.7	70	130			
Uranium	0.23	0.0050	0.1250	0.1005	107	70	130			

Sample ID	LCS	SampType:	LCS	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R5350	RunNo:	5350					
Prep Date:		Analysis Date:	9/6/2012	SeqNo:	152416	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			

Modifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	LCS	SampType:	LCS	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R5350	RunNo:	5350					
Prep Date:		Analysis Date:	9/6/2012	SeqNo:	152416	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID	LCS	SampType: LCS			TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW	Batch ID: R5350			RunNo: 5350					
Prep Date:		Analysis Date: 9/6/2012			SeqNo: 152417		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	102	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			
Uranium	0.024	0.0010	0.02500	0	97.0	85	115			

Sample ID	MB	SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	PBW	Batch ID:	R5350		RunNo:	5350				
Prep Date:		Analysis Date:	9/6/2012		SeqNo:	152420	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5350	RunNo:	5350					
Prep Date:		Analysis Date:	9/6/2012	SeqNo:	152421	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	MB-3476	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3476	RunNo:	5392					
Prep Date:	8/24/2012	Analysis Date:	9/6/2012	SeqNo:	153678	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								

Sample ID	MB-3476	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3476	RunNo:	5508					
Prep Date:	8/24/2012	Analysis Date:	9/13/2012	SeqNo:	157423	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0025								

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	MB-3672	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155037	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-3672	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155038	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			

Sample ID	1208B33-004EMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155059	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	75	125			

Sample ID	1208B33-004EMSD	SampType:	MSD	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155060	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	105	75	125	1.79	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208A02

all Environmental Analysis Laboratory, Inc.

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142960	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142961	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	93.2	90	110			
Bromide	2.4	0.10	2.500	0	95.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.2	90	110			
Phosphorus, Orthophosphate (As P)	4.9	0.50	5.000	0	97.1	90	110			
Sulfate	9.4	0.50	10.00	0	93.7	90	110			

Sample ID	1208944-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142963	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.3	0.10	2.500	0.09490	89.1	83.3	107			

Sample ID	1208944-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142964	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2.4	0.10	2.500	0.09490	91.4	83.3	107	2.49	20	

Sample ID	1208997-001DMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142985	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	93.6	72.5	111			
Bromide	2.5	0.10	2.500	0	98.8	83.3	107			
Nitrogen, Nitrate (As N)	2.9	0.10	2.500	0.3941	102	90.4	113			

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	1208997-001DMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142986	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	94.7	72.5	111	1.20	20	
Bromide	2.5	0.10	2.500	0	100	83.3	107	1.16	20	
Nitrogen, Nitrate (As N)	3.0	0.10	2.500	0.3941	103	90.4	113	0.618	20	

Sample ID	MB	SampType:	MBLK		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBW	Batch ID:	R5064		RunNo:	5064				
Prep Date:		Analysis Date:	8/22/2012		SeqNo:	143390	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								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID	LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions						
Client ID:	LCSW	Batch ID: R5064		RunNo: 5064						
Prep Date:		Analysis Date: 8/22/2012		SeqNo: 143391		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	95.9	90	110			
Chloride	4.6	0.50	5.000	0	92.8	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.5	90	110			
Sulfate	9.5	0.50	10.00	0	94.9	90	110			

Sample ID	1208940-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143393	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0.1511	77.9	76.6	110			

Sample ID	1208940-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143394	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0.1511	79.8	76.6	110	1.74	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	1208996-002BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143430	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.81	0.10	0.5000	0.3631	89.6	76.6	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.5	74.5	115			

Sample ID	1208996-002BMSD		SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC		Batch ID:	R5064		RunNo:	5064				
Prep Date:			Analysis Date:	8/22/2012		SeqNo:	143431		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	0.82	0.10	0.5000	0.3631	90.8	76.6	110	0.787	20		
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.7	74.5	115	0.225	20		

Sample ID	MB	SampType: MBLK		TestCode: EPA Method 300.0: Anions						
Client ID:	PBW	Batch ID: R5064		RunNo: 5064						
Prep Date:		Analysis Date: 8/23/2012		SeqNo: 143470		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								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID	LCS	SampType: LCS			TestCode: EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID: R5064			RunNo: 5064					
Prep Date:		Analysis Date: 8/23/2012			SeqNo: 143471		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.6	90	110			
Chloride	4.7	0.50	5.000	0	94.5	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	103	90	110			
Sulfate	9.7	0.50	10.00	0	96.9	90	110			

Sample ID	1208A06-001CMS	SampType: MS		TestCode: EPA Method 300.0: Anions						
Client ID:	BatchQC	Batch ID: R5064		RunNo: 5064						
Prep Date:	Analysis Date: 8/23/2012		SeqNo: 143473		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.60	0.10	0.5000	0	120	76.6	110			S
Chloride	5.8	0.50	5.000	0	116	87.8	111			S
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0.1859	95.7	74.5	115			
Sulfate	22	0.50	10.00	0	219	84.6	122			S

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	1208A06-001CMSD			SampType:	MSD		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:		R5064		RunNo:	5064			
Prep Date:	Analysis Date:			8/23/2012		SeqNo:	143474		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	0.60	0.10	0.5000	0	120	76.6	110	0.217	20	S	
Chloride	5.8	0.50	5.000	0	115	87.8	111	0.325	20	S	
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0.1859	94.7	74.5	115	0.967	20		
Sulfate	22	0.50	10.00	0	218	84.6	122	0.0990	20	S	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5295	RunNo:	5295					
Prep Date:		Analysis Date:	9/4/2012	SeqNo:	150727	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R5295	RunNo:	5295					
Prep Date:		Analysis Date:	9/4/2012	SeqNo:	150728	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	93.7	90	110			

Sample ID	1209001-001AMS		SampType:	MS		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC		Batch ID:	R5295		RunNo:	5295				
Prep Date:			Analysis Date:	9/4/2012		SeqNo:	150730		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	0.76	0.10	0.5000	0.3080	89.8	76.6	110				

Sample ID	1209001-001AMSD		SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC		Batch ID:	R5295		RunNo:	5295				
Prep Date:			Analysis Date:	9/4/2012		SeqNo:	150731		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	0.75	0.10	0.5000	0.3080	88.5	76.6	110	0.878	20		

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	MB-3460		SampType:	MBLK		TestCode:	EPA Method 8015B: Diesel Range				
Client ID:	PBW		Batch ID:	3460		RunNo:	5044				
Prep Date:	8/23/2012		Analysis Date:	8/23/2012		SeqNo:	143373		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	1.3		1.000		126	79.5	166				

Sample ID	LCS-3460		SampType:	LCS		TestCode:	EPA Method 8015B: Diesel Range				
Client ID:	LCSW		Batch ID:	3460		RunNo:	5044				
Prep Date:	8/23/2012		Analysis Date:	8/23/2012		SeqNo:	143388		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	4.2	1.0	5.000	0	84.0	74	157				
Surr: DNOP	0.51		0.5000		103	79.5	166				

Sample ID	LCSD-3460		SampType:	LCSD		TestCode:	EPA Method 8015B: Diesel Range				
Client ID:	LCSS02		Batch ID:	3460		RunNo:	5044				
Prep Date:	8/23/2012		Analysis Date:	8/23/2012		SeqNo:	143389		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	4.1	1.0	5.000	0	82.7	74	157	1.52	23		
Surr: DNOP	0.51		0.5000		102	79.5	166	0	0		

Modifiers:

- | | | | |
|---|--|----|--|
| V | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| P | Sample pH greater than 2 | R | RPD outside accepted recovery limits |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBW	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145076	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	20		20.00		99.2	69.8	119			

Sample ID	2.5UG GRO LCSB	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSW	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145077	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	87.8	75.9	119			
Surr: BFB	18		20.00		88.2	69.8	119			

Sample ID	1208990-001AMS	SampType:	MS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145080	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	4.5	0.50	5.000	0.1420	86.8	63.5	131			
Surr: BFB	210		200.0		106	69.8	119			

Sample ID	1208990-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145081	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	4.5	0.50	5.000	0.1420	86.9	63.5	131	0.134	16.7	
Surr: BFB	210		200.0		105	69.8	119	0	0	

Qualifiers:

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- E Value above quantitation range
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- P Sample pH greater than 2

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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
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QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145099	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	22		20.00		108	55	140			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145100	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	23		20.00		114	55	140			

Sample ID	1208A05-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145103	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1900		2000		97.5	55	140			

Sample ID	1208A05-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
nt ID:	BatchQC	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145104	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	2600		2000		128	55	140	0	0	

Modifiers:

- | | | | |
|---|--|----|--|
| V | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| J | Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| P | Sample pH greater than 2 | R | RPD outside accepted recovery limits |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID: 5ml-rb	SampType: MBLK	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: PBW	Batch ID: R5213	RunNo: 5213								
Prep Date:	Analysis Date: 8/30/2012	SeqNo: 148266	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								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.6	70	130			
Surr: 4-Bromofluorobenzene	8.4		10.00		84.3	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.5	70	130			
Surr: Toluene-d8	8.5		10.00		84.7	70	130			

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: LCSW	Batch ID: R5213	RunNo: 5213								
Prep Date:	Analysis Date: 8/30/2012	SeqNo: 148267	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.6	70	130			
Toluene	19	1.0	20.00	0	96.9	80	120			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.6	70	130			
Surr: 4-Bromofluorobenzene	8.6		10.00		85.8	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	8.2		10.00		82.5	70	130			

Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	5ml rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R5105			RunNo: 5105					
Prep Date:		Analysis Date: 8/24/2012			SeqNo: 144786		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								
Carbon disulfide	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								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	5ml rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5105	RunNo:	5105					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144786	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5105	RunNo:	5105					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144788	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.4	70	130			
Toluene	21	1.0	20.00	0	104	80	120			
Chlorobenzene	21	1.0	20.00	0	106	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.0	73.7	122			
Trichloroethene (TCE)	18	1.0	20.00	0	90.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5105	RunNo:	5105					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144788	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID	5ml-rb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R5213			RunNo: 5213					
Prep Date:		Analysis Date: 8/30/2012			SeqNo: 148675		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								
1,2,3-Trichlorobenzene	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								

Modifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	5ml-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5213	RunNo:	5213					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	148675	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.6	70	130			
Surr: 4-Bromofluorobenzene	8.4		10.00		84.3	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.5	70	130			
Surr: Toluene-d8	8.5		10.00		84.7	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R5213			RunNo: 5213					
Prep Date:		Analysis Date: 8/30/2012			SeqNo: 148676		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.6	70	130			
Toluene	19	1.0	20.00	0	96.9	80	120			
Chlorobenzene	19	1.0	20.00	0	94.8	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.0	73.7	122			
Trichloroethene (TCE)	19	1.0	20.00	0	93.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.6	70	130			
Surr: 4-Bromofluorobenzene	8.6		10.00		85.8	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	8.2		10.00		82.5	70	130			

Sample ID	1208a02-003a ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	GWM-3	Batch ID:	R5213	RunNo:	5213					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	148677	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.0	66.8	128			
ne	21	1.0	20.00	0	104	70	130			
robenzene	19	1.0	20.00	0	96.6	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	96.6	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.0	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		85.4	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		82.1	70	130			
Surr: Dibromofluoromethane	8.1		10.00		81.3	70	130			
Surr: Toluene-d8	8.4		10.00		84.3	70	130			

Sample ID	1208a02-003a msd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	GWM-3	Batch ID:	R5213	RunNo:	5213					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	148678	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.1	66.8	128	0.921	16.7	
Toluene	19	1.0	20.00	0	93.9	70	130	10.4	18.7	
Chlorobenzene	18	1.0	20.00	0	91.4	70	130	5.54	19.5	
1,1-Dichloroethene	18	1.0	20.00	0	91.3	70	130	5.61	16.7	
Trichloroethene (TCE)	18	1.0	20.00	0	87.8	70	130	2.46	17.5	
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.0	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.6		10.00		86.4	70	130	0	0	
Surr: Dibromofluoromethane	9.1		10.00		91.5	70	130	0	0	
Surr: Toluene-d8	8.4		10.00		84.1	70	130	0	0	

ifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	mb-3477	SampType: MBLK			TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID: 3477			RunNo: 5155					
Prep Date:	8/24/2012	Analysis Date: 8/28/2012			SeqNo: 146454		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								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	mb-3477	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3477	RunNo:	5155					
Prep Date:	8/24/2012	Analysis Date:	8/28/2012	SeqNo:	146454	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
o-aniline	ND	10								
p-chloroaniline	ND	10								
4-Nitroaniline	ND	20								
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: 2,4,6-Tribromophenol	110		200.0		55.0	44.2	126			
Surr: 2-Fluorobiphenyl	43		100.0		43.1	37	114			
Surr: 2-Fluorophenol	78		200.0		38.9	23.4	98			
Surr: 4-Terphenyl-d14	47		100.0		46.6	41.3	116			
Surr: Nitrobenzene-d5	45		100.0		44.9	39.5	118			
Surr: Phenol-d5	62		200.0		31.0	20.9	95.9			

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208A02

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 GW

Sample ID	Ics-3477		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 3477		RunNo: 5155					
Prep Date:	8/24/2012		Analysis Date: 8/28/2012		SeqNo: 146456		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	60.4	38.2	99.4			
4-Chloro-3-methylphenol	150	10	200.0	0	73.7	35.5	108			
2-Chlorophenol	120	10	200.0	0	58.5	29.8	106			
1,4-Dichlorobenzene	49	10	100.0	0	49.3	32.6	91.5			
2,4-Dinitrotoluene	67	10	100.0	0	67.2	44.7	112			
N-Nitrosodi-n-propylamine	72	10	100.0	0	71.5	38.5	105			
4-Nitrophenol	94	10	200.0	0	47.2	11.6	73.1			
Pentachlorophenol	130	20	200.0	0	63.4	20.2	93			
Phenol	94	10	200.0	0	47.1	23	66.1			
Pyrene	60	10	100.0	0	59.8	40.1	101			
1,2,4-Trichlorobenzene	52	10	100.0	0	52.3	37.7	99.1			
Surr: 2,4,6-Tribromophenol	170		200.0		87.2	44.2	126			
Surr: 2-Fluorobiphenyl	65		100.0		64.7	37	114			
Surr: 2-Fluorophenol	110		200.0		52.9	23.4	98			
Surr: 4-Terphenyl-d14	72		100.0		72.2	41.3	116			
Surr: Nitrobenzene-d5	61		100.0		60.5	39.5	118			
Surr: Phenol-d5	97		200.0		48.5	20.9	95.9			

Sample ID	Icsd-3477		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 3477		RunNo: 5155					
Prep Date:	8/24/2012		Analysis Date: 8/28/2012		SeqNo: 146458		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.1	38.2	99.4	7.42	20	
4-Chloro-3-methylphenol	150	10	200.0	0	76.2	35.5	108	3.38	20	
2-Chlorophenol	120	10	200.0	0	61.2	29.8	106	4.43	20	
1,4-Dichlorobenzene	50	10	100.0	0	50.1	32.6	91.5	1.61	20	
2,4-Dinitrotoluene	80	10	100.0	0	80.0	44.7	112	17.4	20	
N-Nitrosodi-n-propylamine	69	10	100.0	0	69.5	38.5	105	2.89	20	
4-Nitrophenol	110	10	200.0	0	55.7	11.6	73.1	16.4	20	
Pentachlorophenol	150	20	200.0	0	73.7	20.2	93	15.1	20	
Phenol	93	10	200.0	0	46.5	23	66.1	1.37	20	
Pyrene	65	10	100.0	0	65.1	40.1	101	8.43	20	
1,2,4-Trichlorobenzene	59	10	100.0	0	58.7	37.7	99.1	11.4	20	
Surr: 2,4,6-Tribromophenol	180		200.0		92.0	44.2	126	0	0	
Surr: 2-Fluorobiphenyl	69		100.0		69.3	37	114	0	0	
Surr: 2-Fluorophenol	110		200.0		52.6	23.4	98	0	0	
Surr: 4-Terphenyl-d14	75		100.0		75.1	41.3	116	0	0	
Surr: Nitrobenzene-d5	68		100.0		68.5	39.5	118	0	0	
Surr: Phenol-d5	92		200.0		46.2	20.9	95.9	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

Sample Log-In Check List

Client Name: Western Refining Gallup		Work Order Number: 1208A02
Received by/date: _____		
Logged By: Anne Thorne	8/22/2012 1:22:00 PM	<i>Anne Thorne</i>
Completed By: Anne Thorne	8/22/2012	<i>Anne Thorne</i>
Reviewed By: IO 08/23/12		

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☒
10. Was preservative added to bottles? Yes ☒ No ☒ NA ☐
11. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

-OOIE, CORE - ADDED 1mL HNO₃ FOR ACCEPTABLE pH. 08/23/12

of preserved bottles checked for pH: 9
Adjusted? YES (2 or >12 unless noted)
Checked by: <i>[Signature]</i>

Special Handling (if applicable)

17. 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: _____	

18. Additional remarks:

19. 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

Mailing Address: Rt 3 Box 7

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

☒ Standard ☐ Rush

Project Name

3rd QTR 2012 Groundwater

Sampling

Project #:

Annual Sampling

Project Manager:

Cheryl Johnson

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 10

Date Time Matrix Sample Request ID

Container Type and #

Preservative Type

HEAL No.

1208 A02

001

002

003

004

005

006

007

008

009

010

011

012

013

014

015

016

017

018

Date: 8/21/12

Time: 0830

Date: 8/21/12

Time: 1322

Relinquished by:

Relinquished by:

Received by:

Received by:

Date

Time

Remarks:

8015B (DRO/GRO)

WQCC Metals (Total and Dissolved)

Analysis Request

Air Bubbles (Y or N)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

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



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

September 24, 2012

Cheryl Johnson

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-0231

FAX (505) 722-0210

RE: 3rd QTR 2012 Groundwater Sampling

OrderNo.: 1208989

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/22/2012 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. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. 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.

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Pilot Eff

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 4:40:00 PM

Lab ID: 1208989-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	3.5	1.0		mg/L	1	8/23/2012 4:11:49 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/23/2012 4:11:49 PM
Surr: DNOP	136	79.5-166		%REC	1	8/23/2012 4:11:49 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	8/27/2012 6:09:16 PM
Surr: BFB	106	69.8-119		%REC	10	8/27/2012 6:09:16 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.018	0.0020		mg/L	1	9/12/2012 10:13:50 AM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 10:13:50 AM
Chromium	0.0066	0.0060		mg/L	1	9/12/2012 10:13:50 AM
Copper	ND	0.0060		mg/L	1	9/12/2012 10:13:50 AM
Iron	0.25	0.020		mg/L	1	9/12/2012 10:13:50 AM
Lead	ND	0.0050		mg/L	1	9/12/2012 10:13:50 AM
Manganese	0.034	0.0020		mg/L	1	9/12/2012 10:13:50 AM
Silver	ND	0.0050		mg/L	1	9/12/2012 10:13:50 AM
Zinc	0.089	0.010		mg/L	1	9/12/2012 10:13:50 AM
EPA METHOD 200.7: TOTAL METALS						Analyst: ELS
Barium	0.023	0.0020		mg/L	1	9/5/2012 9:56:37 AM
Cadmium	ND	0.0020		mg/L	1	9/5/2012 9:56:37 AM
Chromium	0.020	0.0060		mg/L	1	9/5/2012 9:56:37 AM
Copper	0.075	0.0060		mg/L	1	9/5/2012 9:56:37 AM
Iron	0.67	0.020	*	mg/L	1	9/5/2012 9:56:37 AM
Lead	ND	0.0050		mg/L	1	9/5/2012 9:56:37 AM
Manganese	0.041	0.0020		mg/L	1	9/5/2012 9:56:37 AM
Silver	ND	0.0050		mg/L	1	9/5/2012 9:56:37 AM
Zinc	0.23	0.010		mg/L	1	9/5/2012 9:56:37 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0012	0.0010		mg/L	1	9/6/2012 1:37:56 PM
Selenium	0.0014	0.0010		mg/L	1	9/6/2012 1:37:56 PM
Uranium	ND	0.0010		mg/L	1	9/6/2012 1:37:56 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.0035	0.0025		mg/L	2.5	9/6/2012 5:36:18 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 5:36:18 PM
Uranium	ND	0.0025		mg/L	2.5	9/13/2012 1:20:54 PM
EPA METHOD 245.1: MERCURY						Analyst: TES
Mercury	ND	0.00020		mg/L	1	9/11/2012 1:01:21 PM
SM5210B: BOD						Analyst: JAL
Biochemical Oxygen Demand	300	2.0		mg/L	1	8/28/2012 5:49:00 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Pilot Eff

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 4:40:00 PM

Lab ID: 1208989-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Toluene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Ethylbenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,2,4-Trimethylbenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,3,5-Trimethylbenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Naphthalene	ND	20		µg/L	10	8/24/2012 6:41:19 PM
1-Methylnaphthalene	ND	40		µg/L	10	8/24/2012 6:41:19 PM
2-Methylnaphthalene	ND	40		µg/L	10	8/24/2012 6:41:19 PM
Acetone	ND	100		µg/L	10	8/24/2012 6:41:19 PM
Bromobenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Bromodichloromethane	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Bromoform	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Bromomethane	ND	30		µg/L	10	8/24/2012 6:41:19 PM
2-Butanone	ND	100		µg/L	10	8/24/2012 6:41:19 PM
Carbon disulfide	ND	100		µg/L	10	8/24/2012 6:41:19 PM
Carbon Tetrachloride	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Chlorobenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Chloroethane	ND	20		µg/L	10	8/24/2012 6:41:19 PM
Chloroform	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Chloromethane	ND	30		µg/L	10	8/24/2012 6:41:19 PM
2-Chlorotoluene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
4-Chlorotoluene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
cis-1,2-DCE	ND	10		µg/L	10	8/24/2012 6:41:19 PM
cis-1,3-Dichloropropene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	8/24/2012 6:41:19 PM
Dibromochloromethane	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Dibromomethane	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,2-Dichlorobenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,3-Dichlorobenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,4-Dichlorobenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Dichlorodifluoromethane	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,1-Dichloroethane	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,1-Dichloroethene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,2-Dichloropropane	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,3-Dichloropropane	ND	10		µg/L	10	8/24/2012 6:41:19 PM
2,2-Dichloropropane	ND	20		µg/L	10	8/24/2012 6:41:19 PM
1,1-Dichloropropene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Hexachlorobutadiene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
2-Hexanone	ND	100		µg/L	10	8/24/2012 6:41:19 PM

Qualifiers:

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- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Pilot Eff

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 4:40:00 PM

Lab ID: 1208989-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Isopropylbenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
4-Isopropyltoluene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
4-Methyl-2-pentanone	ND	100		µg/L	10	8/24/2012 6:41:19 PM
Methylene Chloride	ND	30		µg/L	10	8/24/2012 6:41:19 PM
n-Butylbenzene	ND	30		µg/L	10	8/24/2012 6:41:19 PM
n-Propylbenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
sec-Butylbenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Styrene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
tert-Butylbenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	8/24/2012 6:41:19 PM
Tetrachloroethene (PCE)	ND	10		µg/L	10	8/24/2012 6:41:19 PM
trans-1,2-DCE	ND	10		µg/L	10	8/24/2012 6:41:19 PM
trans-1,3-Dichloropropene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,2,3-Trichlorobenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,1,1-Trichloroethane	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,1,2-Trichloroethane	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Trichloroethene (TCE)	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Trichlorofluoromethane	ND	10		µg/L	10	8/24/2012 6:41:19 PM
1,2,3-Trichloropropane	ND	20		µg/L	10	8/24/2012 6:41:19 PM
Vinyl chloride	ND	10		µg/L	10	8/24/2012 6:41:19 PM
Xylenes, Total	ND	15		µg/L	10	8/24/2012 6:41:19 PM
Surr: 1,2-Dichloroethane-d4	95.0	70-130		%REC	10	8/24/2012 6:41:19 PM
Surr: 4-Bromofluorobenzene	96.6	70-130		%REC	10	8/24/2012 6:41:19 PM
Surr: Dibromofluoromethane	88.4	70-130		%REC	10	8/24/2012 6:41:19 PM
Surr: Toluene-d8	103	70-130		%REC	10	8/24/2012 6:41:19 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: AL-2 to EP-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:10:00 PM

Lab ID: 1208989-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	2.8	1.0		mg/L	1	8/23/2012 4:33:47 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/23/2012 4:33:47 PM
Surr: DNOP	143	79.5-166		%REC	1	8/23/2012 4:33:47 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	8/27/2012 8:10:02 PM
Surr: BFB	107	69.8-119		%REC	10	8/27/2012 8:10:02 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	8.0	0.50	*	mg/L	5	8/22/2012 10:13:56 PM
Chloride	490	25		mg/L	50	8/23/2012 4:53:22 PM
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	8/22/2012 10:13:56 PM
Bromide	ND	0.50		mg/L	5	8/22/2012 10:13:56 PM
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	8/22/2012 10:13:56 PM
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	8/22/2012 10:13:56 PM
Sulfate	960	25		mg/L	50	8/23/2012 4:53:22 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.029	0.0020		mg/L	1	9/12/2012 10:23:19 AM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 10:23:19 AM
Calcium	250	5.0		mg/L	5	9/12/2012 10:27:12 AM
Chromium	ND	0.0060		mg/L	1	9/12/2012 10:23:19 AM
Copper	ND	0.0060		mg/L	1	9/12/2012 10:23:19 AM
Iron	0.13	0.020		mg/L	1	9/12/2012 10:23:19 AM
Lead	ND	0.0050		mg/L	1	9/12/2012 10:23:19 AM
Magnesium	61	1.0		mg/L	1	9/12/2012 10:23:19 AM
Manganese	0.044	0.0020		mg/L	1	9/12/2012 10:23:19 AM
Potassium	30	1.0		mg/L	1	9/12/2012 10:23:19 AM
Silver	ND	0.0050		mg/L	1	9/12/2012 10:23:19 AM
Sodium	430	5.0		mg/L	5	9/12/2012 10:27:12 AM
Zinc	0.067	0.010		mg/L	1	9/12/2012 10:23:19 AM
EPA METHOD 200.7: TOTAL METALS						Analyst: ELS
Barium	0.036	0.0020		mg/L	1	9/5/2012 10:06:05 AM
Cadmium	ND	0.0020		mg/L	1	9/5/2012 10:06:05 AM
Chromium	ND	0.0060		mg/L	1	9/5/2012 10:06:05 AM
Copper	0.0086	0.0060		mg/L	1	9/5/2012 10:06:05 AM
Iron	0.40	0.020	*	mg/L	1	9/5/2012 10:06:05 AM
Lead	ND	0.0050		mg/L	1	9/5/2012 10:06:05 AM
Manganese	0.061	0.0020	*	mg/L	1	9/5/2012 10:06:05 AM
Silver	ND	0.0050		mg/L	1	9/5/2012 10:06:05 AM
Zinc	0.066	0.010		mg/L	1	9/5/2012 10:06:05 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
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- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: AL-2 to EP-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:10:00 PM

Lab ID: 1208989-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0041	0.0010		mg/L	1	9/6/2012 1:41:52 PM
Selenium	0.0024	0.0010		mg/L	1	9/6/2012 1:41:52 PM
Uranium	ND	0.0010		mg/L	1	9/6/2012 1:41:52 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.0050	0.0025		mg/L	2.5	9/6/2012 5:38:10 PM
Selenium	0.0037	0.0025		mg/L	2.5	9/6/2012 5:38:10 PM
Uranium	ND	0.0025		mg/L	2.5	9/13/2012 1:22:46 PM
EPA METHOD 245.1: MERCURY						Analyst: TES
Mercury	ND	0.00020		mg/L	1	9/11/2012 1:03:10 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Acenaphthylene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Aniline	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Anthracene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Azobenzene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Benz(a)anthracene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Benzo(a)pyrene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Benzo(b)fluoranthene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Benzo(g,h,i)perylene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Benzo(k)fluoranthene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Benzoic acid	ND	100		µg/L	1	8/29/2012 1:21:14 AM
Benzyl alcohol	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Bis(2-chloroethyl)ether	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	8/29/2012 1:21:14 AM
4-Bromophenyl phenyl ether	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Butyl benzyl phthalate	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Carbazole	ND	50		µg/L	1	8/29/2012 1:21:14 AM
4-Chloro-3-methylphenol	ND	50		µg/L	1	8/29/2012 1:21:14 AM
4-Chloroaniline	ND	50		µg/L	1	8/29/2012 1:21:14 AM
2-Chloronaphthalene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
2-Chlorophenol	ND	50		µg/L	1	8/29/2012 1:21:14 AM
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Chrysene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Di-n-butyl phthalate	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Di-n-octyl phthalate	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Dibenz(a,h)anthracene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Dibenzofuran	ND	50		µg/L	1	8/29/2012 1:21:14 AM
1,2-Dichlorobenzene	ND	50		µg/L	1	8/29/2012 1:21:14 AM

Qualifiers:

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- E Value above quantitation range
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- P Sample pH greater than 2
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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: AL-2 to EP-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:10:00 PM

Lab ID: 1208989-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,3-Dichlorobenzene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
1,4-Dichlorobenzene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
3,3'-Dichlorobenzidine	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Diethyl phthalate	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Dimethyl phthalate	ND	50		µg/L	1	8/29/2012 1:21:14 AM
2,4-Dichlorophenol	ND	100		µg/L	1	8/29/2012 1:21:14 AM
2,4-Dimethylphenol	ND	50		µg/L	1	8/29/2012 1:21:14 AM
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	8/29/2012 1:21:14 AM
2,4-Dinitrophenol	ND	100		µg/L	1	8/29/2012 1:21:14 AM
2,4-Dinitrotoluene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
2,6-Dinitrotoluene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Fluoranthene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Fluorene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Hexachlorobenzene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Hexachlorobutadiene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Hexachlorocyclopentadiene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Hexachloroethane	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Isophorone	ND	50		µg/L	1	8/29/2012 1:21:14 AM
1-Methylnaphthalene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
2-Methylnaphthalene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
2-Methylphenol	ND	50		µg/L	1	8/29/2012 1:21:14 AM
3+4-Methylphenol	ND	50		µg/L	1	8/29/2012 1:21:14 AM
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	8/29/2012 1:21:14 AM
N-Nitrosodimethylamine	ND	50		µg/L	1	8/29/2012 1:21:14 AM
N-Nitrosodiphenylamine	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Naphthalene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
2-Nitroaniline	ND	50		µg/L	1	8/29/2012 1:21:14 AM
3-Nitroaniline	ND	50		µg/L	1	8/29/2012 1:21:14 AM
4-Nitroaniline	ND	100		µg/L	1	8/29/2012 1:21:14 AM
Nitrobenzene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
2-Nitrophenol	ND	50		µg/L	1	8/29/2012 1:21:14 AM
4-Nitrophenol	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Pentachlorophenol	ND	100		µg/L	1	8/29/2012 1:21:14 AM
Phenanthrene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Phenol	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Pyrene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Pyridine	ND	50		µg/L	1	8/29/2012 1:21:14 AM
1,2,4-Trichlorobenzene	ND	50		µg/L	1	8/29/2012 1:21:14 AM
2,4,5-Trichlorophenol	ND	50		µg/L	1	8/29/2012 1:21:14 AM
2,4,6-Trichlorophenol	ND	50		µg/L	1	8/29/2012 1:21:14 AM
Surr: 2,4,6-Tribromophenol	91.8	44.2-126		%REC	1	8/29/2012 1:21:14 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: AL-2 to EP-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:10:00 PM

Lab ID: 1208989-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorobiphenyl	80.9	37-114		%REC	1	8/29/2012 1:21:14 AM
Surr: 2-Fluorophenol	62.2	23.4-98		%REC	1	8/29/2012 1:21:14 AM
Surr: 4-Terphenyl-d14	73.2	41.3-116		%REC	1	8/29/2012 1:21:14 AM
Surr: Nitrobenzene-d5	89.3	39.5-118		%REC	1	8/29/2012 1:21:14 AM
Surr: Phenol-d5	49.9	20.9-95.9		%REC	1	8/29/2012 1:21:14 AM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Toluene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Ethylbenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,2,4-Trimethylbenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,3,5-Trimethylbenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Naphthalene	ND	20		µg/L	10	8/24/2012 7:37:48 PM
1-Methylnaphthalene	ND	40		µg/L	10	8/24/2012 7:37:48 PM
2-Methylnaphthalene	ND	40		µg/L	10	8/24/2012 7:37:48 PM
Acetone	ND	100		µg/L	10	8/24/2012 7:37:48 PM
Bromobenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Bromodichloromethane	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Bromoform	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Bromomethane	ND	30		µg/L	10	8/24/2012 7:37:48 PM
2-Butanone	ND	100		µg/L	10	8/24/2012 7:37:48 PM
Carbon disulfide	110	100		µg/L	10	8/24/2012 7:37:48 PM
Carbon Tetrachloride	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Chlorobenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Chloroethane	ND	20		µg/L	10	8/24/2012 7:37:48 PM
Chloroform	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Chloromethane	ND	30		µg/L	10	8/24/2012 7:37:48 PM
2-Chlorotoluene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
4-Chlorotoluene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
cis-1,2-DCE	ND	10		µg/L	10	8/24/2012 7:37:48 PM
cis-1,3-Dichloropropene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	8/24/2012 7:37:48 PM
Dibromochloromethane	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Dibromomethane	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,2-Dichlorobenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,3-Dichlorobenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,4-Dichlorobenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Dichlorodifluoromethane	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,1-Dichloroethane	ND	10		µg/L	10	8/24/2012 7:37:48 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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

Lab Order 1208989

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup**Client Sample ID:** AL-2 to EP-1**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/21/2012 5:10:00 PM**Lab ID:** 1208989-002**Matrix:** AQUEOUS**Received Date:** 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
1,1-Dichloroethene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,2-Dichloropropane	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,3-Dichloropropane	ND	10		µg/L	10	8/24/2012 7:37:48 PM
2,2-Dichloropropane	ND	20		µg/L	10	8/24/2012 7:37:48 PM
1,1-Dichloropropene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Hexachlorobutadiene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
2-Hexanone	ND	100		µg/L	10	8/24/2012 7:37:48 PM
Isopropylbenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
4-Isopropyltoluene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
4-Methyl-2-pentanone	ND	100		µg/L	10	8/24/2012 7:37:48 PM
Methylene Chloride	ND	30		µg/L	10	8/24/2012 7:37:48 PM
n-Butylbenzene	ND	30		µg/L	10	8/24/2012 7:37:48 PM
n-Propylbenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
sec-Butylbenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Styrene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
tert-Butylbenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	8/24/2012 7:37:48 PM
Tetrachloroethene (PCE)	ND	10		µg/L	10	8/24/2012 7:37:48 PM
trans-1,2-DCE	ND	10		µg/L	10	8/24/2012 7:37:48 PM
trans-1,3-Dichloropropene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,2,3-Trichlorobenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,1,1-Trichloroethane	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,1,2-Trichloroethane	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Trichloroethene (TCE)	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Trichlorofluoromethane	ND	10		µg/L	10	8/24/2012 7:37:48 PM
1,2,3-Trichloropropane	ND	20		µg/L	10	8/24/2012 7:37:48 PM
Vinyl chloride	ND	10		µg/L	10	8/24/2012 7:37:48 PM
Xylenes, Total	ND	15		µg/L	10	8/24/2012 7:37:48 PM
Surr: 1,2-Dichloroethane-d4	94.7	70-130		%REC	10	8/24/2012 7:37:48 PM
Surr: 4-Bromofluorobenzene	101	70-130		%REC	10	8/24/2012 7:37:48 PM
Surr: Dibromofluoromethane	93.6	70-130		%REC	10	8/24/2012 7:37:48 PM
Surr: Toluene-d8	101	70-130		%REC	10	8/24/2012 7:37:48 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Equipment Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 6:00:00 PM

Lab ID: 1208989-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Toluene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Ethylbenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Naphthalene	ND	2.0		µg/L	1	8/24/2012 8:34:19 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 8:34:19 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 8:34:19 PM
Acetone	ND	10		µg/L	1	8/24/2012 8:34:19 PM
Bromobenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Bromoform	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Bromomethane	ND	3.0		µg/L	1	8/24/2012 8:34:19 PM
2-Butanone	ND	10		µg/L	1	8/24/2012 8:34:19 PM
Carbon disulfide	ND	10		µg/L	1	8/24/2012 8:34:19 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Chlorobenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Chloroethane	ND	2.0		µg/L	1	8/24/2012 8:34:19 PM
Chloroform	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Chloromethane	ND	3.0		µg/L	1	8/24/2012 8:34:19 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/24/2012 8:34:19 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Dibromomethane	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/24/2012 8:34:19 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
2-Hexanone	ND	10		µg/L	1	8/24/2012 8:34:19 PM

Qualifiers: * Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2
RL Reporting Detection Limit

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** Equipment Blank**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/21/2012 6:00:00 PM**Lab ID:** 1208989-003**Matrix:** AQUEOUS**Received Date:** 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Isopropylbenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/24/2012 8:34:19 PM
Methylene Chloride	ND	3.0		µg/L	1	8/24/2012 8:34:19 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/24/2012 8:34:19 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Styrene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/24/2012 8:34:19 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/24/2012 8:34:19 PM
Vinyl chloride	ND	1.0		µg/L	1	8/24/2012 8:34:19 PM
Xylenes, Total	ND	1.5		µg/L	1	8/24/2012 8:34:19 PM
Surr: 1,2-Dichloroethane-d4	92.7	70-130		%REC	1	8/24/2012 8:34:19 PM
Surr: 4-Bromofluorobenzene	106	70-130		%REC	1	8/24/2012 8:34:19 PM
Surr: Dibromofluoromethane	87.0	70-130		%REC	1	8/24/2012 8:34:19 PM
Surr: Toluene-d8	101	70-130		%REC	1	8/24/2012 8:34:19 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:50:00 PM

Lab ID: 1208989-004

Matrix: AQUEOUS

Received Date: 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Toluene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Ethylbenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Naphthalene	ND	2.0		µg/L	1	8/24/2012 9:02:39 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 9:02:39 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 9:02:39 PM
Acetone	ND	10		µg/L	1	8/24/2012 9:02:39 PM
Bromobenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Bromoform	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Bromomethane	ND	3.0		µg/L	1	8/24/2012 9:02:39 PM
2-Butanone	ND	10		µg/L	1	8/24/2012 9:02:39 PM
Carbon disulfide	ND	10		µg/L	1	8/24/2012 9:02:39 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Chlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Chloroethane	ND	2.0		µg/L	1	8/24/2012 9:02:39 PM
Chloroform	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Chloromethane	ND	3.0		µg/L	1	8/24/2012 9:02:39 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/24/2012 9:02:39 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Dibromomethane	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/24/2012 9:02:39 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
2-Hexanone	ND	10		µg/L	1	8/24/2012 9:02:39 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:50:00 PM

Lab ID: 1208989-004

Matrix: AQUEOUS

Received Date: 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Isopropylbenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/24/2012 9:02:39 PM
Methylene Chloride	ND	3.0		µg/L	1	8/24/2012 9:02:39 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/24/2012 9:02:39 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Styrene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	1	8/24/2012 9:02:39 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/24/2012 9:02:39 PM
Vinyl chloride	ND	1.0		µg/L	1	8/24/2012 9:02:39 PM
Xylenes, Total	ND	1.5		µg/L	1	8/24/2012 9:02:39 PM
Surr: 1,2-Dichloroethane-d4	98.0	70-130		%REC	1	8/24/2012 9:02:39 PM
Surr: 4-Bromofluorobenzene	97.3	70-130		%REC	1	8/24/2012 9:02:39 PM
Surr: Dibromofluoromethane	92.0	70-130		%REC	1	8/24/2012 9:02:39 PM
Surr: Toluene-d8	102	70-130		%REC	1	8/24/2012 9:02:39 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208989

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date:

Lab ID: 1208989-005

Matrix: AQUEOUS

Received Date: 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/24/2012 1:51:12 PM
Surr: BFB	99.1	69.8-119		%REC	1	8/24/2012 1:51:12 PM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Toluene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Ethylbenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Naphthalene	ND	2.0		µg/L	1	8/24/2012 9:30:50 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 9:30:50 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 9:30:50 PM
Acetone	ND	10		µg/L	1	8/24/2012 9:30:50 PM
Bromobenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Bromoform	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Bromomethane	ND	3.0		µg/L	1	8/24/2012 9:30:50 PM
2-Butanone	ND	10		µg/L	1	8/24/2012 9:30:50 PM
Carbon disulfide	ND	10		µg/L	1	8/24/2012 9:30:50 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Chlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Chloroethane	ND	2.0		µg/L	1	8/24/2012 9:30:50 PM
Chloroform	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Chloromethane	ND	3.0		µg/L	1	8/24/2012 9:30:50 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/24/2012 9:30:50 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Dibromomethane	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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

Lab Order 1208989

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup**Client Sample ID:** Trip Blank**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:****Lab ID:** 1208989-005**Matrix:** AQUEOUS**Received Date:** 8/22/2012 1:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
2,2-Dichloropropane	ND	2.0		µg/L	1	8/24/2012 9:30:50 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
2-Hexanone	ND	10		µg/L	1	8/24/2012 9:30:50 PM
Isopropylbenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/24/2012 9:30:50 PM
Methylene Chloride	ND	3.0		µg/L	1	8/24/2012 9:30:50 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/24/2012 9:30:50 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Styrene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/24/2012 9:30:50 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/24/2012 9:30:50 PM
Vinyl chloride	ND	1.0		µg/L	1	8/24/2012 9:30:50 PM
Xylenes, Total	ND	1.5		µg/L	1	8/24/2012 9:30:50 PM
Surr: 1,2-Dichloroethane-d4	99.5	70-130		%REC	1	8/24/2012 9:30:50 PM
Surr: 4-Bromofluorobenzene	96.5	70-130		%REC	1	8/24/2012 9:30:50 PM
Surr: Dibromofluoromethane	97.3	70-130		%REC	1	8/24/2012 9:30:50 PM
Surr: Toluene-d8	98.1	70-130		%REC	1	8/24/2012 9:30:50 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits



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

August 29, 2012

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

Date Received : August 24, 2012
Description :
Sample ID : 1208989-001D PILOT EFF
Collected By :
Collection Date : 08/21/12 16:40

ESC Sample # : L591700-01
Site ID :
Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	650	100	mg/l	410.4	08/28/12	10

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
This report shall not be reproduced, except in full, without the written approval from ESC.
Reported: 08/29/12 09:15 Printed: 08/29/12 09:15



YOUR LAB OF CHOICE

Hall Environmental Analysis Laboratory
Anne Thorne
4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L591700

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

August 29, 2012

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed			
		Units	% Rec						
COD	< 10	mg/l			WG609724	08/28/12 16:03			
Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch		
COD	mg/l	14.0	15.0	5.48*	5	L591809-01	WG609724		
COD	mg/l	0	0	0	5	L591399-02	WG609724		
Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch			
		Known Val	Result						
COD	mg/l	230	238.	103.	90-110	WG609724			
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch	
COD	mg/l	240.	238.	104.	90-110	0.837	5	WG609724	
Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch	
		MS Res	Ref Res	TV					
COD	mg/l	486.	84.0	400	100.	90-110	L591674-01	WG609724	
Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
COD	mg/l	488.	486.	101.	90-110	0.411	5	L591674-01	WG609724

Batch number /Run number / Sample number cross reference

WG609724: R2320393: L591700-01

* * 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#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK		TestCode:	EPA Method 200.7: Dissolved Metals				
Client ID:	PBW	Batch ID:	R5457		RunNo:	5457				
Prep Date:		Analysis Date:	9/12/2012		SeqNo:	155926	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								
Lead	ND	0.0050								
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: R5457			RunNo: 5457					
Prep Date:		Analysis Date: 9/12/2012			SeqNo: 155927		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	0.51	0.0020	0.5000	0	101	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.50	0.020	0.5000	0.002590	99.7	85	115			
Lead	0.50	0.0050	0.5000	0	100	85	115			
Magnesium	53	1.0	50.00	0	106	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	52	1.0	50.00	0	105	85	115			
Zinc	0.49	0.010	0.5000	0	99.0	85	115			

Sample ID	1208996-003DMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457				
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156329		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Barium	0.65	0.0020	0.5000	0.1271	105	70	130				
Cadmium	0.53	0.0020	0.5000	0	105	70	130				
Chromium	0.52	0.0060	0.5000	0.001070	103	70	130				
Copper	0.56	0.0060	0.5000	0	112	70	130				

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156329	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.56	0.020	0.5000	0.04012	104	70	130			
Lead	0.51	0.0050	0.5000	0	102	70	130			
Magnesium	69	1.0	50.00	13.55	112	70	130			
Manganese	0.53	0.0020	0.5000	0.0006300	106	70	130			
Potassium	56	1.0	50.00	2.284	108	70	130			
Silver	0.10	0.0050	0.1000	0	103	70	130			
Sodium	83	1.0	50.00	27.29	111	70	130			
Zinc	0.52	0.010	0.5000	0.01358	101	70	130			

Sample ID	1208996-003DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156330	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.63	0.0020	0.5000	0.1271	101	70	130	3.05	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	2.73	20	
Cobalt	0.50	0.0060	0.5000	0.001070	99.7	70	130	3.48	20	
Copper	0.55	0.0060	0.5000	0	110	70	130	1.68	20	
Iron	0.56	0.020	0.5000	0.04012	103	70	130	0.424	20	
Lead	0.50	0.0050	0.5000	0	99.2	70	130	2.65	20	
Magnesium	68	1.0	50.00	13.55	109	70	130	1.63	20	
Manganese	0.52	0.0020	0.5000	0.0006300	103	70	130	2.93	20	
Potassium	55	1.0	50.00	2.284	106	70	130	1.53	20	
Silver	0.099	0.0050	0.1000	0	99.4	70	130	3.30	20	
Sodium	82	1.0	50.00	27.29	109	70	130	0.982	20	
Zinc	0.50	0.010	0.5000	0.01358	96.5	70	130	4.24	20	

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156332	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	370	5.0	250.0	66.77	122	70	130			

Sample ID	1208996-003DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156333	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	330	5.0	250.0	66.77	106	70	130	11.7	20	

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals						
Client ID:	PBW	Batch ID: R5457		RunNo: 5457						
Prep Date:	Analysis Date: 9/12/2012		SeqNo: 156417		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	0.0050								
Iron	ND	0.020								
Lead	ND	0.0050								
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:	R5457		RunNo:	5457				
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156418		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Barium	0.49	0.0020	0.5000	0.001060	97.0	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.3	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	95.5	85	115			
Copper	0.52	0.0060	0.5000	0	104	85	115			
Iron	0.50	0.020	0.5000	0.003080	99.0	85	115			
Lead	0.47	0.0050	0.5000	0	94.1	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Potassium	49	1.0	50.00	0	98.4	85	115			
Silver	0.10	0.0050	0.1000	0.001260	98.6	85	115			
Sodium	51	1.0	50.00	0	103	85	115			
Zinc	0.46	0.010	0.5000	0	92.6	85	115			

Sample ID	1208A83-002AMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457				
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156420		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Barium	0.46	0.0020	0.5000	0.007580	89.5	70	130			
Cadmium	0.46	0.0020	0.5000	0.001310	92.5	70	130			
Chromium	0.44	0.0060	0.5000	0	88.1	70	130			
Copper	0.55	0.0060	0.5000	0.04934	99.8	70	130			

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A83-002AMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156420		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.47	0.020	0.5000	0.003920	92.6	70	130			
Magnesium	78	1.0	50.00	28.77	99.1	70	130			
Potassium	50	1.0	50.00	1.179	97.1	70	130			
Silver	0.093	0.0050	0.1000	0	93.0	70	130			
Sodium	60	1.0	50.00	9.466	102	70	130			
Zinc	0.90	0.010	0.5000	0.5237	75.6	70	130			

Sample ID	1208A83-002AMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156421		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0.007580	88.6	70	130	0.945	20	
Cadmium	0.46	0.0020	0.5000	0.001310	91.1	70	130	1.54	20	
Chromium	0.43	0.0060	0.5000	0	86.4	70	130	1.96	20	
Copper	0.55	0.0060	0.5000	0.04934	99.3	70	130	0.477	20	
	0.46	0.020	0.5000	0.003920	91.1	70	130	1.62	20	
Magnesium	78	1.0	50.00	28.77	98.2	70	130	0.598	20	
Potassium	49	1.0	50.00	1.179	96.4	70	130	0.773	20	
Silver	0.093	0.0050	0.1000	0	93.1	70	130	0.150	20	
Sodium	60	1.0	50.00	9.466	101	70	130	0.803	20	
Zinc	0.89	0.010	0.5000	0.5237	72.8	70	130	1.59	20	

Sample ID	1208A83-002AMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156423		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130			
Manganese	4.3	0.010	2.500	1.779	99.4	70	130			

Sample ID	1208A83-002AMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156424		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130	0.395	20	
Manganese	4.3	0.010	2.500	1.779	102	70	130	1.46	20	

ifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3476		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	3476		RunNo:	5311			
Prep Date:	8/24/2012		Analysis Date:	9/5/2012		SeqNo:	151201	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								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-3476		SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW		Batch ID:	3476		RunNo:	5311			
Prep Date:	8/24/2012		Analysis Date:	9/5/2012		SeqNo:	151202	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	101	85	115			
Copper	0.52	0.0060	0.5000	0	103	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Lead	0.51	0.0050	0.5000	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.3	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.50	0.010	0.5000	0	99.8	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3476	SampType:	MBLK	TestCode:	EPA 200.8: Metals					
Client ID:	PBW	Batch ID:	3476	RunNo:	5508					
Prep Date:	8/24/2012	Analysis Date:	9/13/2012	SeqNo:	157390	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0025								

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208476-008EMS			SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	BatchQC			Batch ID:	R5350		RunNo:	5350			
Prep Date:				Analysis Date:	9/6/2012		SeqNo:	152349		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.029	0.0010	0.02500	0	117	70	130				

Sample ID	1208654-002AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152351		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.16	0.0050	0.1250	0.03618	99.4	70	130				

Sample ID	1208944-008AMS		SampType: MS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	BatchQC		Batch ID: R5350		RunNo: 5350					
Prep Date:			Analysis Date: 9/6/2012		SeqNo: 152364		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.0002792	97.9	70	130			
Selenium	0.029	0.0010	0.02500	0.004276	97.4	70	130			
Uranium	0.034	0.0010	0.02500	0.008442	103	70	130			

Sample ID	1208A83-002AMS			SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals		
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350			
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152381		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.7	70	130			
Selenium	0.026	0.0010	0.02500	0.001591	98.2	70	130			
Uranium	0.027	0.0010	0.02500	0.0009453	103	70	130			

Sample ID	1208B35-001DMS			SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	BatchQC			Batch ID:	R5350		RunNo:	5350			
Prep Date:				Analysis Date:	9/6/2012		SeqNo:	152398		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.12	0.0050	0.1250	0.003821	93.6	70	130				
Selenium	0.11	0.0050	0.1250	0.007249	83.7	70	130				
Uranium	0.23	0.0050	0.1250	0.1005	107	70	130				

Sample ID	LCS		SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	LCSW		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152416		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0	101	85	115				

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS	SampType:	LCS	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R5350	RunNo:	5350					
Prep Date:		Analysis Date:	9/6/2012	SeqNo:	152416	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID	LCS	SampType:	LCS	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R5350	RunNo:	5350					
Prep Date:		Analysis Date:	9/6/2012	SeqNo:	152417	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	102	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			
Uranium	0.024	0.0010	0.02500	0	97.0	85	115			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5350	RunNo:	5350					
Prep Date:		Analysis Date:	9/6/2012	SeqNo:	152420	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	MB	SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	PBW	Batch ID:	R5350		RunNo:	5350				
Prep Date:		Analysis Date:	9/6/2012		SeqNo:	152421	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3476	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3476	RunNo:	5392					
Prep Date:	8/24/2012	Analysis Date:	9/6/2012	SeqNo:	153678	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								

Sample ID	MB-3476	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3476	RunNo:	5508					
Prep Date:	8/24/2012	Analysis Date:	9/13/2012	SeqNo:	157423	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0025								

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3672	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155037	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-3672	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155038	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			

Sample ID	1208B33-004EMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155059	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	75	125			

Sample ID	1208B33-004EMSD	SampType:	MSD	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155060	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	105	75	125	1.79	20	

ifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143390	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:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143391	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	95.9	90	110			
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	93.2	90	110			
Bromide	2.4	0.10	2.500	0	94.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.3	90	110			
Phosphorus, Orthophosphate (As P)	5.0	0.50	5.000	0	99.5	90	110			

Sample ID	1208940-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143393	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.54	0.10	0.5000	0.1511	77.9	76.6	110			
Nitrogen, Nitrite (As N)	0.81	0.10	1.000	0	81.0	72.5	111			
Bromide	2.6	0.10	2.500	0.3290	91.2	83.3	107			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0.1243	96.7	90.4	113			

Sample ID	1208940-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143394	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.55	0.10	0.5000	0.1511	79.8	76.6	110	1.74	20	
Nitrogen, Nitrite (As N)	0.81	0.10	1.000	0	80.9	72.5	111	0.116	20	
Bromide	2.6	0.10	2.500	0.3290	91.1	83.3	107	0.0223	20	
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0.1243	96.9	90.4	113	0.226	20	

Sample ID	1208996-002BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143430	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

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208996-002BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143430	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.81	0.10	0.5000	0.3631	89.6	76.6	110			
Nitrogen, Nitrite (As N)	0.83	0.10	1.000	0	83.2	72.5	111			
Bromide	3.0	0.10	2.500	0.6420	94.3	83.3	107			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.5	74.5	115			

Sample ID	1208996-002BMSD		SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC		Batch ID:	R5064		RunNo:	5064				
Prep Date:			Analysis Date:	8/22/2012		SeqNo:	143431		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	0.82	0.10	0.5000	0.3631	90.8	76.6	110	0.787	20		
Nitrogen, Nitrite (As N)	0.83	0.10	1.000	0	83.5	72.5	111	0.306	20		
Bromide	3.0	0.10	2.500	0.6420	94.2	83.3	107	0.0749	20		
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.7	74.5	115	0.225	20		

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143470	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:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143471	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.6	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.5	90	110			
Bromide	2.4	0.10	2.500	0	97.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	103	90	110			

Sample ID	1208A06-001CMS			SampType:	MS		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC			Batch ID:	R5064		RunNo:	5064			
Prep Date:				Analysis Date:	8/23/2012		SeqNo:	143473		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Flags:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A06-001CMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143473	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.60	0.10	0.5000	0	120	76.6	110			S
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	92.8	72.5	111			
Bromide	2.4	0.10	2.500	0	95.2	83.3	107			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90.4	113			
Phosphorus, Orthophosphate (As P)	5.0	0.50	5.000	0.1859	95.7	74.5	115			

Sample ID	1208A06-001CMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143474	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.60	0.10	0.5000	0	120	76.6	110	0.217	20	S
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	91.9	72.5	111	1.01	20	
Bromide	2.4	0.10	2.500	0	94.2	83.3	107	1.06	20	
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.1	90.4	113	0.898	20	
Phosphorus, Orthophosphate (As P)	4.9	0.50	5.000	0.1859	94.7	74.5	115	0.967	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5077	RunNo:	5077					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143850	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:	R5077	RunNo:	5077					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143852	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.6	90	110			
Sulfate	9.3	0.50	10.00	0	93.3	90	110			

Sample ID	1208A37-001DMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5077	RunNo:	5077					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143866	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	19	0.50	5.000	14.01	107	87.8	111			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A37-001DMSD			SampType:	MSD		TestCode:	EPA Method 300.0: Anions		
Client ID:	BatchQC		Batch ID:	R5077		RunNo:	5077			
Prep Date:	Analysis Date:			8/23/2012		SeqNo:	143868		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	19	0.50	5.000	14.01	109	87.8	111	0.338	20	
Sulfate	73	0.50	10.00	63.63	97.3	84.6	122	0.485	20	E

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: MB-3460	SampType: MBLK	TestCode: EPA Method 8015B: Diesel Range								
Client ID: PBW	Batch ID: 3460	RunNo: 5044								
Prep Date: 8/23/2012	Analysis Date: 8/23/2012	SeqNo: 143373	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	1.3		1.000		126	79.5	166			

Sample ID: LCS-3460	SampType: LCS	TestCode: EPA Method 8015B: Diesel Range								
Client ID: LCSW	Batch ID: 3460	RunNo: 5044								
Prep Date: 8/23/2012	Analysis Date: 8/23/2012	SeqNo: 143388	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.2	1.0	5.000	0	84.0	74	157			
Surr: DNOP	0.51		0.5000		103	79.5	166			

Sample ID: LCSD-3460	SampType: LCSD	TestCode: EPA Method 8015B: Diesel Range								
Client ID: LCSS02	Batch ID: 3460	RunNo: 5044								
Prep Date: 8/23/2012	Analysis Date: 8/23/2012	SeqNo: 143389	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.1	1.0	5.000	0	82.7	74	157	1.52	23	
Surr: DNOP	0.51		0.5000		102	79.5	166	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A74-001ADUP	SampType:	DUP	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146146	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	2200	50						6.88	21	
Surr: BFB	68000		20000		342	43.1	185	0	0	S

ifiers:

Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBW	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145076	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	20		20.00		99.2	69.8	119			

Sample ID	2.5UG GRO LCSB	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSW	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145077	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	87.8	75.9	119			
Surr: BFB	18		20.00		88.2	69.8	119			

Sample ID	1208990-001AMS	SampType:	MS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145080	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics (GRO)	4.5	0.50	5.000	0.1420	86.8	63.5	131			
Surr: BFB	210		200.0		106	69.8	119			

Sample ID	1208990-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145081	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics (GRO)	4.5	0.50	5.000	0.1420	86.9	63.5	131	0.134	16.7	
Surr: BFB	210		200.0		105	69.8	119	0	0	

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBW	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146142	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	22		20.00		111	69.8	119			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSW	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146143	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	87.9	75.9	119			
Surr: BFB	20		20.00		98.3	69.8	119			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208989-001AMS	SampType:	MS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	Pilot Eff	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146156	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	4.7	0.50	5.000	0.2540	89.4	63.5	131			
Surr: BFB	190		200.0		97.3	69.8	119			

Sample ID	1208989-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	Pilot Eff	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146157	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	4.7	0.50	5.000	0.2540	89.8	63.5	131	0.422	16.7	
Surr: BFB	220		200.0		111	69.8	119	0	0	

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A74-001ADUP	SampType:	DUP	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146168	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	26		20.00		130	74.5	131	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208989

all Environmental Analysis Laboratory, Inc.

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ML RB	SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	PBW	Batch ID:	R5110		RunNo:	5110				
Prep Date:		Analysis Date:	8/24/2012		SeqNo:	145099	Units:	%REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	22		20.00		108	55	140			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145100	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	23		20.00		114	55	140			

Sample ID	1208A05-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145103	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1900		2000		97.5	55	140			

Sample ID	1208A05-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
ent ID:	BatchQC	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145104	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	2600		2000		128	55	140	0	0	

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146165	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	24		20.00		118	55	140			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146166	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	25		20.00		124	55	140			

Sample ID	1208B76-001AMS		SampType:	MS		TestCode:	EPA Method 8021B: Volatiles				
Client ID:	BatchQC		Batch ID:	R5142		RunNo:	5142				
Prep Date:			Analysis Date:	8/27/2012		SeqNo:	146172		Units: %REC		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: 4-Bromofluorobenzene	97		100.0		97.5	55	140				

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B76-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146173	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	120		100.0		124	55	140	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: 5ml rb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R5105	RunNo: 5105								
Prep Date:	Analysis Date: 8/24/2012	SeqNo: 144786	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								
anone	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								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

ifiers:

Value exceeds Maximum Contaminant Level.
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH greater than 2

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: 5ml rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5105		RunNo: 5105							
Prep Date:	Analysis Date: 8/24/2012		SeqNo: 144786		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R5105		RunNo: 5105							
Prep Date:	Analysis Date: 8/24/2012		SeqNo: 144788		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.4	70	130			
Toluene	21	1.0	20.00	0	104	80	120			
Chlorobenzene	21	1.0	20.00	0	106	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.0	73.7	122			
Trichloroethene (TCE)	18	1.0	20.00	0	90.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5105	RunNo:	5105					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144788	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3477	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3477	RunNo:	5155					
Prep Date:	8/24/2012	Analysis Date:	8/28/2012	SeqNo:	146454	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								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3477	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3477	RunNo:	5155					
Prep Date:	8/24/2012	Analysis Date:	8/28/2012	SeqNo:	146454	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
o-aniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	20								
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: 2,4,6-Tribromophenol	110		200.0		55.0	44.2	126			
Surr: 2-Fluorobiphenyl	43		100.0		43.1	37	114			
Surr: 2-Fluorophenol	78		200.0		38.9	23.4	98			
Surr: 4-Terphenyl-d14	47		100.0		46.6	41.3	116			
Surr: Nitrobenzene-d5	45		100.0		44.9	39.5	118			
Surr: Phenol-d5	62		200.0		31.0	20.9	95.9			

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	lcs-3477		SampType:	LCS		TestCode:	EPA Method 8270C: Semivolatiles			
Client ID:	LCSW		Batch ID:	3477		RunNo:	5155			
Prep Date:	8/24/2012		Analysis Date:	8/28/2012		SeqNo:	146456		Units: µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	60.4	38.2	99.4			
4-Chloro-3-methylphenol	150	10	200.0	0	73.7	35.5	108			
2-Chlorophenol	120	10	200.0	0	58.5	29.8	106			
1,4-Dichlorobenzene	49	10	100.0	0	49.3	32.6	91.5			
2,4-Dinitrotoluene	67	10	100.0	0	67.2	44.7	112			
N-Nitrosodi-n-propylamine	72	10	100.0	0	71.5	38.5	105			
4-Nitrophenol	94	10	200.0	0	47.2	11.6	73.1			
Pentachlorophenol	130	20	200.0	0	63.4	20.2	93			
Phenol	94	10	200.0	0	47.1	23	66.1			
Pyrene	60	10	100.0	0	59.8	40.1	101			
1,2,4-Trichlorobenzene	52	10	100.0	0	52.3	37.7	99.1			
Surr: 2,4,6-Tribromophenol	170		200.0		87.2	44.2	126			
Surr: 2-Fluorobiphenyl	65		100.0		64.7	37	114			
Surr: 2-Fluorophenol	110		200.0		52.9	23.4	98			
Surr: 4-Terphenyl-d14	72		100.0		72.2	41.3	116			
Surr: Nitrobenzene-d5	61		100.0		60.5	39.5	118			
Surr: Phenol-d5	97		200.0		48.5	20.9	95.9			

Sample ID	lcsd-3477		SampType:	LCSd		TestCode:	EPA Method 8270C: Semivolatiles			
Client ID:	LCSS02		Batch ID:	3477		RunNo:	5155			
Prep Date:	8/24/2012		Analysis Date:	8/28/2012		SeqNo:	146458		Units: µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.1	38.2	99.4	7.42	20	
4-Chloro-3-methylphenol	150	10	200.0	0	76.2	35.5	108	3.38	20	
2-Chlorophenol	120	10	200.0	0	61.2	29.8	106	4.43	20	
1,4-Dichlorobenzene	50	10	100.0	0	50.1	32.6	91.5	1.61	20	
2,4-Dinitrotoluene	80	10	100.0	0	80.0	44.7	112	17.4	20	
N-Nitrosodi-n-propylamine	69	10	100.0	0	69.5	38.5	105	2.89	20	
4-Nitrophenol	110	10	200.0	0	55.7	11.6	73.1	16.4	20	
Pentachlorophenol	150	20	200.0	0	73.7	20.2	93	15.1	20	
Phenol	93	10	200.0	0	46.5	23	66.1	1.37	20	
Pyrene	65	10	100.0	0	65.1	40.1	101	8.43	20	
1,2,4-Trichlorobenzene	59	10	100.0	0	58.7	37.7	99.1	11.4	20	
Surr: 2,4,6-Tribromophenol	180		200.0		92.0	44.2	126	0	0	
Surr: 2-Fluorobiphenyl	69		100.0		69.3	37	114	0	0	
Surr: 2-Fluorophenol	110		200.0		52.6	23.4	98	0	0	
Surr: 4-Terphenyl-d14	75		100.0		75.1	41.3	116	0	0	
Surr: Nitrobenzene-d5	68		100.0		68.5	39.5	118	0	0	
Surr: Phenol-d5	92		200.0		46.2	20.9	95.9	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208989

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3456	SampType:	MBLK	TestCode:	SM5210B: BOD					
Client ID:	PBW	Batch ID:	3456	RunNo:	5122					
Prep Date:	8/23/2012	Analysis Date:	8/28/2012	SeqNo:	145574	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-3456	SampType:	MBLK	TestCode:	SM5210B: BOD					
Client ID:	PBW	Batch ID:	3456	RunNo:	5122					
Prep Date:	8/23/2012	Analysis Date:	8/28/2012	SeqNo:	145575	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-3456		SampType:	LCS		TestCode:	SM5210B: BOD				
Client ID:	LCSW		Batch ID:	3456		RunNo:	5122				
Prep Date:	8/23/2012		Analysis Date:	8/28/2012		SeqNo:	145576		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Biochemical Oxygen Demand	180	2.0	198.0	0	92.9	84.6	115.4				

Sample ID: LCSD-3456		SampType: LCSD		TestCode: SM5210B: BOD							
Client ID: LCSS02		Batch ID: 3456		RunNo: 5122							
Prep Date: 8/23/2012		Analysis Date: 8/28/2012		SeqNo: 145577		Units: mg/L					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand		180	2.0	198.0	0	93.4	84.6	115.4	0.542	20	

Sample ID	1208937-002ADUP	SampType:	DUP	TestCode:	SM5210B: BOD					
Client ID:	BatchQC	Batch ID:	3456	RunNo:	5122					
Prep Date:	8/23/2012	Analysis Date:	8/28/2012	SeqNo:	145582	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	62	2.0						0.0962	20	

Modifiers:

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



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87105
TEL: 505-345-3975 FAX: 505-345-4101
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name:	Western Refining Gallup	Work Order Number:	1208989
Received by/date:	AT 8/22/12		
Logged By:	Anne Thorne	8/22/2012 1:20:00 PM	Anne Thorne
Completed By:	Anne Thorne	8/22/2012	Anne Thorne
Reviewed By:			

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved bottles checked for pH:	6
Adjusted?	<2 or >12 unless noted
Checked by:	

Special Handling (if applicable)

17. 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:			

18. Additional remarks:

19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



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

September 24, 2012

Cheryl Johnson

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-0231

FAX (505) 722-0210

RE: 3rd QTR 2012 Groundwater Sampling

OrderNo.: 1208990

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 8/22/2012 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. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. 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.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1208990

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Infl to AL-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:00:00 PM

Lab ID: 1208990-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/24/2012 9:23:28 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/24/2012 9:23:28 AM
Surr: DNOP	124	79.5-166		%REC	1	8/24/2012 9:23:28 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	8/24/2012 2:21:30 PM
Surr: BFB	91.0	69.8-119		%REC	10	8/24/2012 2:21:30 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Chloride	470	25		mg/L	50	8/23/2012 5:05:47 PM
SM5210B: BOD						Analyst: JAL
Biochemical Oxygen Demand	16	2.0		mg/L	1	8/28/2012 5:49:00 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Acenaphthylene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Aniline	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Anthracene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Azobenzene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Benz(a)anthracene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Benzo(a)pyrene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Benzo(b)fluoranthene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Benzo(g,h,i)perylene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Benzo(k)fluoranthene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Benzoic acid	ND	100		µg/L	1	8/29/2012 1:51:00 AM
Benzyl alcohol	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Bis(2-chloroethyl)ether	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Bis(2-ethylhexyl)phthalate	72	50		µg/L	1	8/29/2012 1:51:00 AM
4-Bromophenyl phenyl ether	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Butyl benzyl phthalate	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Carbazole	ND	50		µg/L	1	8/29/2012 1:51:00 AM
4-Chloro-3-methylphenol	ND	50		µg/L	1	8/29/2012 1:51:00 AM
4-Chloroaniline	ND	50		µg/L	1	8/29/2012 1:51:00 AM
2-Chloronaphthalene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
2-Chlorophenol	ND	50		µg/L	1	8/29/2012 1:51:00 AM
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Chrysene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Di-n-butyl phthalate	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Di-n-octyl phthalate	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Dibenz(a,h)anthracene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Dibenzofuran	ND	50		µg/L	1	8/29/2012 1:51:00 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208990

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Infl to AL-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:00:00 PM

Lab ID: 1208990-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,2-Dichlorobenzene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
1,3-Dichlorobenzene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
1,4-Dichlorobenzene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
3,3'-Dichlorobenzidine	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Diethyl phthalate	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Dimethyl phthalate	ND	50		µg/L	1	8/29/2012 1:51:00 AM
2,4-Dichlorophenol	ND	100		µg/L	1	8/29/2012 1:51:00 AM
2,4-Dimethylphenol	ND	50		µg/L	1	8/29/2012 1:51:00 AM
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	8/29/2012 1:51:00 AM
2,4-Dinitrophenol	ND	100		µg/L	1	8/29/2012 1:51:00 AM
2,4-Dinitrotoluene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
2,6-Dinitrotoluene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Fluoranthene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Fluorene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Hexachlorobenzene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Hexachlorobutadiene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Hexachlorocyclopentadiene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Hexachloroethane	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Isophorone	ND	50		µg/L	1	8/29/2012 1:51:00 AM
1-Methylnaphthalene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
2-Methylnaphthalene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
2-Methylphenol	ND	50		µg/L	1	8/29/2012 1:51:00 AM
3+4-Methylphenol	ND	50		µg/L	1	8/29/2012 1:51:00 AM
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	8/29/2012 1:51:00 AM
N-Nitrosodimethylamine	ND	50		µg/L	1	8/29/2012 1:51:00 AM
N-Nitrosodiphenylamine	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Naphthalene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
2-Nitroaniline	ND	50		µg/L	1	8/29/2012 1:51:00 AM
3-Nitroaniline	ND	50		µg/L	1	8/29/2012 1:51:00 AM
4-Nitroaniline	ND	100		µg/L	1	8/29/2012 1:51:00 AM
Nitrobenzene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
2-Nitrophenol	ND	50		µg/L	1	8/29/2012 1:51:00 AM
4-Nitrophenol	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Pentachlorophenol	ND	100		µg/L	1	8/29/2012 1:51:00 AM
Phenanthrene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Phenol	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Pyrene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
Pyridine	ND	50		µg/L	1	8/29/2012 1:51:00 AM
1,2,4-Trichlorobenzene	ND	50		µg/L	1	8/29/2012 1:51:00 AM
2,4,5-Trichlorophenol	ND	50		µg/L	1	8/29/2012 1:51:00 AM
2,4,6-Trichlorophenol	ND	50		µg/L	1	8/29/2012 1:51:00 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208990

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Infl to AL-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:00:00 PM

Lab ID: 1208990-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2,4,6-Tribromophenol	111	44.2-126		%REC	1	8/29/2012 1:51:00 AM
Surr: 2-Fluorobiphenyl	95.7	37-114		%REC	1	8/29/2012 1:51:00 AM
Surr: 2-Fluorophenol	68.9	23.4-98		%REC	1	8/29/2012 1:51:00 AM
Surr: 4-Terphenyl-d14	73.3	41.3-116		%REC	1	8/29/2012 1:51:00 AM
Surr: Nitrobenzene-d5	103	39.5-118		%REC	1	8/29/2012 1:51:00 AM
Surr: Phenol-d5	56.7	20.9-95.9		%REC	1	8/29/2012 1:51:00 AM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Toluene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Ethylbenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,2,4-Trimethylbenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,3,5-Trimethylbenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Naphthalene	ND	20		µg/L	10	8/25/2012 2:41:30 AM
1-Methylnaphthalene	ND	40		µg/L	10	8/25/2012 2:41:30 AM
2-Methylnaphthalene	ND	40		µg/L	10	8/25/2012 2:41:30 AM
Acetone	ND	100		µg/L	10	8/25/2012 2:41:30 AM
Bromobenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Bromodichloromethane	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Bromoform	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Bromomethane	ND	30		µg/L	10	8/25/2012 2:41:30 AM
2-Butanone	ND	100		µg/L	10	8/25/2012 2:41:30 AM
Carbon disulfide	ND	100		µg/L	10	8/25/2012 2:41:30 AM
Carbon Tetrachloride	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Chlorobenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Chloroethane	ND	20		µg/L	10	8/25/2012 2:41:30 AM
Chloroform	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Chloromethane	ND	30		µg/L	10	8/25/2012 2:41:30 AM
2-Chlorotoluene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
4-Chlorotoluene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
cis-1,2-DCE	ND	10		µg/L	10	8/25/2012 2:41:30 AM
cis-1,3-Dichloropropene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	8/25/2012 2:41:30 AM
Dibromochloromethane	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Dibromomethane	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,2-Dichlorobenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,3-Dichlorobenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,4-Dichlorobenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Dichlorodifluoromethane	ND	10		µg/L	10	8/25/2012 2:41:30 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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

Lab Order 1208990

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup**Client Sample ID:** Infl to AL-2**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/21/2012 5:00:00 PM**Lab ID:** 1208990-001**Matrix:** AQUEOUS**Received Date:** 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
1,1-Dichloroethane	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,1-Dichloroethene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,2-Dichloropropane	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,3-Dichloropropane	ND	10		µg/L	10	8/25/2012 2:41:30 AM
2,2-Dichloropropane	ND	20		µg/L	10	8/25/2012 2:41:30 AM
1,1-Dichloropropene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Hexachlorobutadiene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
2-Hexanone	ND	100		µg/L	10	8/25/2012 2:41:30 AM
Isopropylbenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
4-Isopropyltoluene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
4-Methyl-2-pentanone	ND	100		µg/L	10	8/25/2012 2:41:30 AM
Methylene Chloride	ND	30		µg/L	10	8/25/2012 2:41:30 AM
n-Butylbenzene	ND	30		µg/L	10	8/25/2012 2:41:30 AM
n-Propylbenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
sec-Butylbenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Styrene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
tert-Butylbenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	8/25/2012 2:41:30 AM
Tetrachloroethene (PCE)	ND	10		µg/L	10	8/25/2012 2:41:30 AM
trans-1,2-DCE	ND	10		µg/L	10	8/25/2012 2:41:30 AM
trans-1,3-Dichloropropene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,2,3-Trichlorobenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,2,4-Trichlorobenzene	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,1,1-Trichloroethane	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,1,2-Trichloroethane	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Trichloroethene (TCE)	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Trichlorofluoromethane	ND	10		µg/L	10	8/25/2012 2:41:30 AM
1,2,3-Trichloropropane	ND	20		µg/L	10	8/25/2012 2:41:30 AM
Vinyl chloride	ND	10		µg/L	10	8/25/2012 2:41:30 AM
Xylenes, Total	ND	15		µg/L	10	8/25/2012 2:41:30 AM
Surr: 1,2-Dichloroethane-d4	98.3	70-130		%REC	10	8/25/2012 2:41:30 AM
Surr: 4-Bromofluorobenzene	105	70-130		%REC	10	8/25/2012 2:41:30 AM
Surr: Dibromofluoromethane	94.6	70-130		%REC	10	8/25/2012 2:41:30 AM
Surr: Toluene-d8	99.6	70-130		%REC	10	8/25/2012 2:41:30 AM
SM4500-H+B: PH						Analyst: IDC
pH	8.68	1.68	*H	pH units	1	8/24/2012 12:22:30 PM

Qualifiers: * Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2
RL Reporting Detection Limit

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208990

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Infl to EP-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:20:00 PM

Lab ID: 1208990-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	9.6	1.0		mg/L	1	8/23/2012 4:55:38 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/23/2012 4:55:38 PM
Surr: DNOP	142	79.5-166		%REC	1	8/23/2012 4:55:38 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.50		mg/L	10	8/24/2012 4:21:06 PM
Surr: BFB	114	69.8-119		%REC	10	8/24/2012 4:21:06 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	8.4	0.50	*	mg/L	5	8/22/2012 8:09:48 PM
Chloride	510	25		mg/L	50	8/23/2012 5:43:00 PM
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	8/22/2012 8:09:48 PM
Bromide	0.51	0.50		mg/L	5	8/22/2012 8:09:48 PM
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	8/22/2012 8:09:48 PM
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	8/22/2012 8:09:48 PM
Sulfate	1000	25		mg/L	50	8/23/2012 5:43:00 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.030	0.0020		mg/L	1	9/12/2012 10:31:05 AM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 10:31:05 AM
Calcium	250	5.0		mg/L	5	9/12/2012 10:47:44 AM
Chromium	ND	0.0060		mg/L	1	9/12/2012 10:31:05 AM
Copper	ND	0.0060		mg/L	1	9/12/2012 10:31:05 AM
Iron	0.18	0.020		mg/L	1	9/12/2012 10:31:05 AM
Lead	ND	0.0050		mg/L	1	9/12/2012 10:31:05 AM
Magnesium	61	1.0		mg/L	1	9/12/2012 10:31:05 AM
Manganese	0.047	0.0020		mg/L	1	9/12/2012 10:31:05 AM
Potassium	31	1.0		mg/L	1	9/12/2012 10:31:05 AM
Silver	ND	0.0050		mg/L	1	9/12/2012 10:31:05 AM
Sodium	430	5.0		mg/L	5	9/12/2012 10:47:44 AM
Zinc	0.054	0.010		mg/L	1	9/12/2012 10:31:05 AM
EPA METHOD 200.7: TOTAL METALS						Analyst: ELS
Barium	0.038	0.0020		mg/L	1	9/5/2012 10:25:33 AM
Cadmium	ND	0.0020		mg/L	1	9/5/2012 10:25:33 AM
Chromium	ND	0.0060		mg/L	1	9/5/2012 10:25:33 AM
Copper	0.0090	0.0060		mg/L	1	9/5/2012 10:25:33 AM
Iron	0.47	0.020	*	mg/L	1	9/5/2012 10:25:33 AM
Lead	ND	0.0050		mg/L	1	9/5/2012 10:25:33 AM
Manganese	0.065	0.0020	*	mg/L	1	9/5/2012 10:25:33 AM
Silver	ND	0.0050		mg/L	1	9/5/2012 10:25:33 AM
Zinc	0.064	0.010		mg/L	1	9/5/2012 10:25:33 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208990

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Infl to EP-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:20:00 PM

Lab ID: 1208990-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0042	0.0010		mg/L	1	9/6/2012 1:45:48 PM
Selenium	0.0023	0.0010		mg/L	1	9/6/2012 1:45:48 PM
Uranium	0.0011	0.0010		mg/L	1	9/6/2012 1:45:48 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.0050	0.0025		mg/L	2.5	9/6/2012 5:40:02 PM
Selenium	0.0034	0.0025		mg/L	2.5	9/6/2012 5:40:02 PM
Uranium	ND	0.0025		mg/L	2.5	9/13/2012 1:24:38 PM
EPA METHOD 245.1: MERCURY						Analyst: TES
Mercury	ND	0.00020		mg/L	1	9/11/2012 1:08:27 PM
SM5210B: BOD						Analyst: JAL
Biochemical Oxygen Demand	23	2.0		mg/L	1	8/28/2012 5:49:00 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Acenaphthylene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Aniline	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Anthracene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Azobenzene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Benz(a)anthracene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Benzo(a)pyrene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Benzo(b)fluoranthene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Benzo(g,h,i)perylene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Benzo(k)fluoranthene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Benzoic acid	ND	100		µg/L	1	8/29/2012 2:20:26 AM
Benzyl alcohol	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Bis(2-chloroethyl)ether	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Bis(2-chloroisopropyl)ether	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Bis(2-ethylhexyl)phthalate	ND	50		µg/L	1	8/29/2012 2:20:26 AM
4-Bromophenyl phenyl ether	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Butyl benzyl phthalate	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Carbazole	ND	50		µg/L	1	8/29/2012 2:20:26 AM
4-Chloro-3-methylphenol	ND	50		µg/L	1	8/29/2012 2:20:26 AM
4-Chloroaniline	ND	50		µg/L	1	8/29/2012 2:20:26 AM
2-Chloronaphthalene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
2-Chlorophenol	ND	50		µg/L	1	8/29/2012 2:20:26 AM
4-Chlorophenyl phenyl ether	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Chrysene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Di-n-butyl phthalate	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Di-n-octyl phthalate	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Dibenz(a,h)anthracene	ND	50		µg/L	1	8/29/2012 2:20:26 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208990

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Infl to EP-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:20:00 PM

Lab ID: 1208990-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Dibenzofuran	ND	50		µg/L	1	8/29/2012 2:20:26 AM
1,2-Dichlorobenzene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
1,3-Dichlorobenzene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
1,4-Dichlorobenzene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
3,3'-Dichlorobenzidine	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Diethyl phthalate	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Dimethyl phthalate	ND	50		µg/L	1	8/29/2012 2:20:26 AM
2,4-Dichlorophenol	ND	100		µg/L	1	8/29/2012 2:20:26 AM
2,4-Dimethylphenol	ND	50		µg/L	1	8/29/2012 2:20:26 AM
4,6-Dinitro-2-methylphenol	ND	100		µg/L	1	8/29/2012 2:20:26 AM
2,4-Dinitrophenol	ND	100		µg/L	1	8/29/2012 2:20:26 AM
2,4-Dinitrotoluene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
2,6-Dinitrotoluene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Fluoranthene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Fluorene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Hexachlorobenzene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Hexachlorobutadiene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Hexachlorocyclopentadiene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Hexachloroethane	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Isophorone	ND	50		µg/L	1	8/29/2012 2:20:26 AM
1-Methylnaphthalene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
2-Methylnaphthalene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
2-Methylphenol	ND	50		µg/L	1	8/29/2012 2:20:26 AM
3+4-Methylphenol	ND	50		µg/L	1	8/29/2012 2:20:26 AM
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	8/29/2012 2:20:26 AM
N-Nitrosodimethylamine	ND	50		µg/L	1	8/29/2012 2:20:26 AM
N-Nitrosodiphenylamine	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Naphthalene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
2-Nitroaniline	ND	50		µg/L	1	8/29/2012 2:20:26 AM
3-Nitroaniline	ND	50		µg/L	1	8/29/2012 2:20:26 AM
4-Nitroaniline	ND	100		µg/L	1	8/29/2012 2:20:26 AM
Nitrobenzene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
2-Nitrophenol	ND	50		µg/L	1	8/29/2012 2:20:26 AM
4-Nitrophenol	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Pentachlorophenol	ND	100		µg/L	1	8/29/2012 2:20:26 AM
Phenanthrene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Phenol	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Pyrene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Pyridine	ND	50		µg/L	1	8/29/2012 2:20:26 AM
1,2,4-Trichlorobenzene	ND	50		µg/L	1	8/29/2012 2:20:26 AM
2,4,5-Trichlorophenol	ND	50		µg/L	1	8/29/2012 2:20:26 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208990

Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Infl to EP-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:20:00 PM

Lab ID: 1208990-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
2,4,6-Trichlorophenol	ND	50		µg/L	1	8/29/2012 2:20:26 AM
Surr: 2,4,6-Tribromophenol	104	44.2-126		%REC	1	8/29/2012 2:20:26 AM
Surr: 2-Fluorobiphenyl	90.0	37-114		%REC	1	8/29/2012 2:20:26 AM
Surr: 2-Fluorophenol	68.6	23.4-98		%REC	1	8/29/2012 2:20:26 AM
Surr: 4-Terphenyl-d14	78.4	41.3-116		%REC	1	8/29/2012 2:20:26 AM
Surr: Nitrobenzene-d5	87.0	39.5-118		%REC	1	8/29/2012 2:20:26 AM
Surr: Phenol-d5	56.4	20.9-95.9		%REC	1	8/29/2012 2:20:26 AM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Toluene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Ethylbenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Naphthalene	ND	2.0		µg/L	1	8/25/2012 3:09:44 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/25/2012 3:09:44 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/25/2012 3:09:44 AM
Acetone	14	10		µg/L	1	8/25/2012 3:09:44 AM
Bromobenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Bromodichloromethane	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Bromoform	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Bromomethane	ND	3.0		µg/L	1	8/25/2012 3:09:44 AM
2-Butanone	ND	10		µg/L	1	8/25/2012 3:09:44 AM
Carbon disulfide	ND	10		µg/L	1	8/25/2012 3:09:44 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Chlorobenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Chloroethane	ND	2.0		µg/L	1	8/25/2012 3:09:44 AM
Chloroform	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Chloromethane	ND	3.0		µg/L	1	8/25/2012 3:09:44 AM
2-Chlorotoluene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
4-Chlorotoluene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
cis-1,2-DCE	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/25/2012 3:09:44 AM
Dibromochloromethane	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Dibromomethane	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208990

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Infl to EP-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:20:00 PM

Lab ID: 1208990-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/25/2012 3:09:44 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
2-Hexanone	ND	10		µg/L	1	8/25/2012 3:09:44 AM
Isopropylbenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/25/2012 3:09:44 AM
Methylene Chloride	ND	3.0		µg/L	1	8/25/2012 3:09:44 AM
n-Butylbenzene	ND	3.0		µg/L	1	8/25/2012 3:09:44 AM
n-Propylbenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
sec-Butylbenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Styrene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
tert-Butylbenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/25/2012 3:09:44 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
trans-1,2-DCE	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/25/2012 3:09:44 AM
Vinyl chloride	ND	1.0		µg/L	1	8/25/2012 3:09:44 AM
Xylenes, Total	ND	1.5		µg/L	1	8/25/2012 3:09:44 AM
Surr: 1,2-Dichloroethane-d4	98.8	70-130		%REC	1	8/25/2012 3:09:44 AM
Surr: 4-Bromofluorobenzene	104	70-130		%REC	1	8/25/2012 3:09:44 AM
Surr: Dibromofluoromethane	98.0	70-130		%REC	1	8/25/2012 3:09:44 AM
Surr: Toluene-d8	106	70-130		%REC	1	8/25/2012 3:09:44 AM
SM4500-H+B: PH						Analyst: IDC
pH	8.91	1.68	*H	pH units	1	8/24/2012 12:26:33 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 1208990
Date Reported: 9/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 5:50:00 PM

Lab ID: 1208990-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Toluene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Ethylbenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Naphthalene	ND	2.0		µg/L	1	8/25/2012 4:06:12 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/25/2012 4:06:12 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/25/2012 4:06:12 AM
Acetone	ND	10		µg/L	1	8/25/2012 4:06:12 AM
Bromobenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Bromodichloromethane	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Bromoform	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Bromomethane	ND	3.0		µg/L	1	8/25/2012 4:06:12 AM
2-Butanone	ND	10		µg/L	1	8/25/2012 4:06:12 AM
Carbon disulfide	ND	10		µg/L	1	8/25/2012 4:06:12 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Chlorobenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Chloroethane	ND	2.0		µg/L	1	8/25/2012 4:06:12 AM
Chloroform	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Chloromethane	ND	3.0		µg/L	1	8/25/2012 4:06:12 AM
2-Chlorotoluene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
4-Chlorotoluene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
cis-1,2-DCE	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/25/2012 4:06:12 AM
Dibromochloromethane	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Dibromomethane	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/25/2012 4:06:12 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
2-Hexanone	ND	10		µg/L	1	8/25/2012 4:06:12 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208990

Date Reported: 9/24/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** Field Blank**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/21/2012 5:50:00 PM**Lab ID:** 1208990-003**Matrix:** AQUEOUS**Received Date:** 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Isopropylbenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/25/2012 4:06:12 AM
Methylene Chloride	ND	3.0		µg/L	1	8/25/2012 4:06:12 AM
n-Butylbenzene	ND	3.0		µg/L	1	8/25/2012 4:06:12 AM
n-Propylbenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
sec-Butylbenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Styrene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
tert-Butylbenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/25/2012 4:06:12 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
trans-1,2-DCE	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/25/2012 4:06:12 AM
Vinyl chloride	ND	1.0		µg/L	1	8/25/2012 4:06:12 AM
Xylenes, Total	ND	1.5		µg/L	1	8/25/2012 4:06:12 AM
Surr: 1,2-Dichloroethane-d4	95.3	70-130		%REC	1	8/25/2012 4:06:12 AM
Surr: 4-Bromofluorobenzene	94.5	70-130		%REC	1	8/25/2012 4:06:12 AM
Surr: Dibromofluoromethane	95.3	70-130		%REC	1	8/25/2012 4:06:12 AM
Surr: Toluene-d8	102	70-130		%REC	1	8/25/2012 4:06:12 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits



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Mt. Juliet, TN 37122
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Tax I.D. 62-0814289
Est. 1970

REPORT OF ANALYSIS

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

August 29, 2012

Date Received : August 24, 2012
Description :
Sample ID : 1208990-001E INFL TO AL-2
Collected By :
Collection Date : 08/21/12 17:00

ESC Sample # : L591695-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	240	10.	mg/l	410.4	08/29/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 08/29/12 16:57 Printed: 08/29/12 16:57



YOUR LAB OF CHOICE

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

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

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

August 29, 2012

Date Received : August 24, 2012
Description :
Sample ID : 1208990-002G INFL TO EP-1
Collected By :
Collection Date : 08/21/12 17:20

ESC Sample # : L591695-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
COD	260	250	mg/l	410.4	08/28/12	25

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 08/29/12 16:57 Printed: 08/29/12 16:57



YOUR LAB OF CHOICE

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

Quality Assurance Report
Level II
L591695

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1-800-767-5859
Fax (615) 758-5859
Tax I.D. 62-0814289
Est. 1970

August 29, 2012

Analyte	Result	Laboratory Blank Units	% Rec	Limit	Batch	Date Analyzed
COD	< 10	mg/l			WG609724	08/28/12 16:03
COD	< 10	mg/l			WG609949	08/29/12 15:26

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
COD	mg/l	14.0	15.0	5.48*	5	L591808-01	WG609724
COD	mg/l	0	0	0	5	L591399-02	WG609724
COD	mg/l	1100	1100	0.905	5	L591566-01	WG609949
COD	mg/l	1200	1200	1.65	5	L591566-02	WG609949
COD	mg/l	1000	1000	4.88	5	L591566-03	WG609949
COD	mg/l	110000	120000	5.13*	5	L591636-01	WG609949
COD	mg/l	240.	240.	1.65	5	L591695-01	WG609949
COD	mg/l	15000	16000	6.45*	5	L591334-01	WG609949

Analyte	Units	Laboratory Control Known Val	Sample Result	% Rec	Limit	Batch
COD	mg/l	230	238.	103.	90-110	WG609724
COD	mg/l	230	239.	104.	90-110	WG609949

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
COD	mg/l	240.	238.	104.	90-110	0.837	5	WG609724
COD	mg/l	240.	239.	104.	90-110	0.418	5	WG609949

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
COD	mg/l	486.	84.0	400	100.	90-110	L591674-01	WG609724
COD	mg/l	412.	9.30	400	101.	90-110	L591817-01	WG609949

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
COD	mg/l	488.	486.	101.	90-110	0.411	5	L591674-01	WG609724
COD	mg/l	412.	412.	101.	90-110	0	5	L591817-01	WG609949

Batch number / Run number / Sample number cross reference

WG609724: R2320393: L591695-01 02
WG609949: R2322374: L591695-01

* * 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#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID MB	SampType: MBLK	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: PBW	Batch ID: R5457	RunNo: 5457								
Prep Date:	Analysis Date: 9/12/2012	SeqNo: 155926 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								
Lead	ND	0.0050								
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: R5457	RunNo: 5457								
Prep Date:	Analysis Date: 9/12/2012	SeqNo: 155927 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	0.51	0.0020	0.5000	0	101	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.50	0.020	0.5000	0.002590	99.7	85	115			
Lead	0.50	0.0050	0.5000	0	100	85	115			
Magnesium	53	1.0	50.00	0	106	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	52	1.0	50.00	0	105	85	115			
Zinc	0.49	0.010	0.5000	0	99.0	85	115			

Sample ID 1208996-003DMS	SampType: MS	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: BatchQC	Batch ID: R5457	RunNo: 5457								
Prep Date:	Analysis Date: 9/12/2012	SeqNo: 156329 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.65	0.0020	0.5000	0.1271	105	70	130			
Cadmium	0.53	0.0020	0.5000	0	105	70	130			
Chromium	0.52	0.0060	0.5000	0.001070	103	70	130			
Copper	0.56	0.0060	0.5000	0	112	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208996-003DMS		SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC		Batch ID: R5457		RunNo: 5457					
Prep Date:			Analysis Date: 9/12/2012		SeqNo: 156329		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.56	0.020	0.5000	0.04012	104	70	130			
Lead	0.51	0.0050	0.5000	0	102	70	130			
Magnesium	69	1.0	50.00	13.55	112	70	130			
Manganese	0.53	0.0020	0.5000	0.0006300	106	70	130			
Potassium	56	1.0	50.00	2.284	108	70	130			
Silver	0.10	0.0050	0.1000	0	103	70	130			
Sodium	83	1.0	50.00	27.29	111	70	130			
Zinc	0.52	0.010	0.5000	0.01358	101	70	130			

Sample ID	1208996-003DMSD		SampType: MSD		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC		Batch ID: R5457		RunNo: 5457					
Prep Date:			Analysis Date: 9/12/2012		SeqNo: 156330		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.63	0.0020	0.5000	0.1271	101	70	130	3.05	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	2.73	20	
Cromium	0.50	0.0060	0.5000	0.001070	99.7	70	130	3.48	20	
Copper	0.55	0.0060	0.5000	0	110	70	130	1.68	20	
Iron	0.56	0.020	0.5000	0.04012	103	70	130	0.424	20	
Lead	0.50	0.0050	0.5000	0	99.2	70	130	2.65	20	
Magnesium	68	1.0	50.00	13.55	109	70	130	1.63	20	
Manganese	0.52	0.0020	0.5000	0.0006300	103	70	130	2.93	20	
Potassium	55	1.0	50.00	2.284	106	70	130	1.53	20	
Silver	0.099	0.0050	0.1000	0	99.4	70	130	3.30	20	
Sodium	82	1.0	50.00	27.29	109	70	130	0.982	20	
Zinc	0.50	0.010	0.5000	0.01358	96.5	70	130	4.24	20	

Sample ID	1208996-003DMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457				
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156332		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Calcium	370	5.0	250.0	66.77	122	70	130				

Sample ID	1208996-003DMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457				
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156333		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Calcium	330	5.0	250.0	66.77	106	70	130	11.7	20		

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156417	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								
Lead	ND	0.0050								
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:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156418	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.001060	97.0	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.3	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	95.5	85	115			
Copper	0.52	0.0060	0.5000	0	104	85	115			
Iron	0.50	0.020	0.5000	0.003080	99.0	85	115			
Lead	0.47	0.0050	0.5000	0	94.1	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Potassium	49	1.0	50.00	0	98.4	85	115			
Silver	0.10	0.0050	0.1000	0.001260	98.6	85	115			
Sodium	51	1.0	50.00	0	103	85	115			
Zinc	0.46	0.010	0.5000	0	92.6	85	115			

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156420	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0.007580	89.5	70	130			
Cadmium	0.46	0.0020	0.5000	0.001310	92.5	70	130			
Chromium	0.44	0.0060	0.5000	0	88.1	70	130			
Copper	0.55	0.0060	0.5000	0.04934	99.8	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156420	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.47	0.020	0.5000	0.003920	92.6	70	130			
Magnesium	78	1.0	50.00	28.77	99.1	70	130			
Potassium	50	1.0	50.00	1.179	97.1	70	130			
Silver	0.093	0.0050	0.1000	0	93.0	70	130			
Sodium	60	1.0	50.00	9.466	102	70	130			
Zinc	0.90	0.010	0.5000	0.5237	75.6	70	130			

Sample ID	1208A83-002AMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156421	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0.007580	88.6	70	130	0.945	20	
Cadmium	0.46	0.0020	0.5000	0.001310	91.1	70	130	1.54	20	
Chromium	0.43	0.0060	0.5000	0	86.4	70	130	1.96	20	
Copper	0.55	0.0060	0.5000	0.04934	99.3	70	130	0.477	20	
	0.46	0.020	0.5000	0.003920	91.1	70	130	1.62	20	
Magnesium	78	1.0	50.00	28.77	98.2	70	130	0.598	20	
Potassium	49	1.0	50.00	1.179	96.4	70	130	0.773	20	
Silver	0.093	0.0050	0.1000	0	93.1	70	130	0.150	20	
Sodium	60	1.0	50.00	9.466	101	70	130	0.803	20	
Zinc	0.89	0.010	0.5000	0.5237	72.8	70	130	1.59	20	

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156423	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130			
Manganese	4.3	0.010	2.500	1.779	99.4	70	130			

Sample ID	1208A83-002AMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156424	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130	0.395	20	
Manganese	4.3	0.010	2.500	1.779	102	70	130	1.46	20	

Modifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3476		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	3476		RunNo:	5311			
Prep Date:	8/24/2012		Analysis Date:	9/5/2012		SeqNo:	151201	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								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-3476		SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW		Batch ID:	3476		RunNo:	5311			
Prep Date:	8/24/2012		Analysis Date:	9/5/2012		SeqNo:	151202	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	101	85	115			
Copper	0.52	0.0060	0.5000	0	103	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Lead	0.51	0.0050	0.5000	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.3	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.50	0.010	0.5000	0	99.8	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Wall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3476	SampType:	MBLK	TestCode:	EPA 200.8: Metals					
Client ID:	PBW	Batch ID:	3476	RunNo:	5508					
Prep Date:	8/24/2012	Analysis Date:	9/13/2012	SeqNo:	157390	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0025								

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208476-008EMS			SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152349		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.029	0.0010	0.02500	0	117	70	130				

Sample ID	1208654-002AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152351		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.16	0.0050	0.1250	0.03618	99.4	70	130				

Sample ID	1208944-008AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152364		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0.0002792	97.9	70	130				
Selenium	0.029	0.0010	0.02500	0.004276	97.4	70	130				
Uranium	0.034	0.0010	0.02500	0.008442	103	70	130				

Sample ID	1208A83-002AMS			SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152381		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0	99.7	70	130				
Selenium	0.026	0.0010	0.02500	0.001591	98.2	70	130				
Uranium	0.027	0.0010	0.02500	0.0009453	103	70	130				

Sample ID	1208B35-001DMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152398		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.12	0.0050	0.1250	0.003821	93.6	70	130				
Selenium	0.11	0.0050	0.1250	0.007249	83.7	70	130				
Uranium	0.23	0.0050	0.1250	0.1005	107	70	130				

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R5350		RunNo: 5350					
Prep Date:			Analysis Date: 9/6/2012		SeqNo: 152416		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R5350		RunNo: 5350					
Prep Date:			Analysis Date: 9/6/2012		SeqNo: 152416		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R5350		RunNo: 5350					
Prep Date:			Analysis Date: 9/6/2012		SeqNo: 152417		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	102	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			
Uranium	0.024	0.0010	0.02500	0	97.0	85	115			

Sample ID	MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals						
Client ID:	PBW	Batch ID: R5350		RunNo: 5350						
Prep Date:		Analysis Date: 9/6/2012		SeqNo: 152420		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	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:	R5350		RunNo:	5350				
Prep Date:		Analysis Date:	9/6/2012		SeqNo:	152421	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Modifiers:

- | | | |
|--|----|--|
| Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| Sample pH greater than 2 | R | RPD outside accepted recovery limits |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3476	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3476	RunNo:	5392					
Prep Date:	8/24/2012	Analysis Date:	9/6/2012	SeqNo:	153678	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								

Sample ID	MB-3476	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3476	RunNo:	5508					
Prep Date:	8/24/2012	Analysis Date:	9/13/2012	SeqNo:	157423	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0025								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3672	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155037	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-3672	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155038	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			

Sample ID	1208B33-004EMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155059	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	75	125			

Sample ID	1208B33-004EMSD	SampType:	MSD	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155060	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	105	75	125	1.79	20	

Modifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143390	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:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143391	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Fluoride	0.48	0.10	0.5000	0	95.9	90	110			
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	93.2	90	110			
Bromide	2.4	0.10	2.500	0	94.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.3	90	110			
Phosphorus, Orthophosphate (As P)	5.0	0.50	5.000	0	99.5	90	110			

Sample ID	1208940-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143393	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Fluoride	0.54	0.10	0.5000	0.1511	77.9	76.6	110			
Nitrogen, Nitrite (As N)	0.81	0.10	1.000	0	81.0	72.5	111			
Bromide	2.6	0.10	2.500	0.3290	91.2	83.3	107			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0.1243	96.7	90.4	113			

Sample ID	1208940-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143394	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Fluoride	0.55	0.10	0.5000	0.1511	79.8	76.6	110	1.74	20	
Nitrogen, Nitrite (As N)	0.81	0.10	1.000	0	80.9	72.5	111	0.116	20	
Bromide	2.6	0.10	2.500	0.3290	91.1	83.3	107	0.0223	20	
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0.1243	96.9	90.4	113	0.226	20	

Sample ID	1208996-002BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	143430	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
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208996-002BMS		SampType:	MS		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5064		RunNo:	5064			
Prep Date:			Analysis Date:	8/22/2012		SeqNo:	143430		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.81	0.10	0.5000	0.3631	89.6	76.6	110			
Nitrogen, Nitrite (As N)	0.83	0.10	1.000	0	83.2	72.5	111			
Bromide	3.0	0.10	2.500	0.6420	94.3	83.3	107			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.5	74.5	115			

Sample ID	1208996-002BMSD		SampType:	MSD		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5064		RunNo:	5064			
Prep Date:			Analysis Date:	8/22/2012		SeqNo:	143431		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.82	0.10	0.5000	0.3631	90.8	76.6	110	0.787	20	
Nitrogen, Nitrite (As N)	0.83	0.10	1.000	0	83.5	72.5	111	0.306	20	
Bromide	3.0	0.10	2.500	0.6420	94.2	83.3	107	0.0749	20	
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.7	74.5	115	0.225	20	

Sample ID	MB		SampType:	MBLK		TestCode:	EPA Method 300.0: Anions			
Client ID:	PBW		Batch ID:	R5064		RunNo:	5064			
Prep Date:			Analysis Date:	8/23/2012		SeqNo:	143470		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:	R5064		RunNo:	5064			
Prep Date:			Analysis Date:	8/23/2012		SeqNo:	143471		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	96.6	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.5	90	110			
Bromide	2.4	0.10	2.500	0	97.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	102	90	110			
Phosphorus, Orthophosphate (As P	5.1	0.50	5.000	0	103	90	110			

Sample ID	1208A06-001CMS		SampType:	MS		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5064		RunNo:	5064			
Prep Date:			Analysis Date:	8/23/2012		SeqNo:	143473		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A06-001CMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5064	RunNo:	5064					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143473	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.60	0.10	0.5000	0	120	76.6	110			S
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	92.8	72.5	111			
Bromide	2.4	0.10	2.500	0	95.2	83.3	107			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90.4	113			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0.1859	95.7	74.5	115			

Sample ID	1208A06-001CMSD			SampType:	MSD		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5064		RunNo:	5064				
Prep Date:			Analysis Date:	8/23/2012		SeqNo:	143474		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	0.60	0.10	0.5000	0	120	76.6	110	0.217	20	S	
Nitrogen, Nitrite (As N)	0.92	0.10	1.000	0	91.9	72.5	111	1.01	20		
Bromide	2.4	0.10	2.500	0	94.2	83.3	107	1.06	20		
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.1	90.4	113	0.898	20		
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0.1859	94.7	74.5	115	0.967	20		

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5077	RunNo:	5077					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143850	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: R5077			RunNo: 5077					
Prep Date:		Analysis Date: 8/23/2012			SeqNo: 143852		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.6	90	110			
Sulfate	9.3	0.50	10.00	0	93.3	90	110			

Sample ID	1208A37-001DMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5077	RunNo:	5077					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143866	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	19	0.50	5.000	14.01	107	87.8	111			

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A37-001DMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5077	RunNo:	5077					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143868	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	19	0.50	5.000	14.01	109	87.8	111	0.338	20	
Sulfate	73	0.50	10.00	63.63	97.3	84.6	122	0.485	20	E

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3460	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range					
Client ID:	PBW	Batch ID:	3460	RunNo:	5044					
Prep Date:	8/23/2012	Analysis Date:	8/23/2012	SeqNo:	143373	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	1.3		1.000		126	79.5	166			

Sample ID	LCS-3460	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range					
Client ID:	LCSW	Batch ID:	3460	RunNo:	5044					
Prep Date:	8/23/2012	Analysis Date:	8/23/2012	SeqNo:	143388	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.2	1.0	5.000	0	84.0	74	157			
Surr: DNOP	0.51		0.5000		103	79.5	166			

Sample ID	LCSD-3460	SampType:	LCSD	TestCode:	EPA Method 8015B: Diesel Range					
Client ID:	LCSS02	Batch ID:	3460	RunNo:	5044					
Prep Date:	8/23/2012	Analysis Date:	8/23/2012	SeqNo:	143389	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.1	1.0	5.000	0	82.7	74	157	1.52	23	
Surr: DNOP	0.51		0.5000		102	79.5	166	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBW	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145076	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	20		20.00		99.2	69.8	119			

Sample ID	2.5UG GRO LCSB	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSW	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145077	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	87.8	75.9	119			
Surr: BFB	18		20.00		88.2	69.8	119			

Sample ID	1208990-001AMS	SampType:	MS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	Infl to AL-2	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145080	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	4.5	0.50	5.000	0.1420	86.8	63.5	131			
Surr: BFB	210		200.0		106	69.8	119			

Sample ID	1208990-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	Infl to AL-2	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145081	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	4.5	0.50	5.000	0.1420	86.9	63.5	131	0.134	16.7	
Surr: BFB	210		200.0		105	69.8	119	0	0	

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145099	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	22		20.00		108	55	140			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145100	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	23		20.00		114	55	140			

Sample ID	1208A05-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145103	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1900		2000		97.5	55	140			

Sample ID	1208A05-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5110	RunNo:	5110					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145104	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	2600		2000		128	55	140	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208990

all Environmental Analysis Laboratory, Inc.

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R5105		RunNo: 5105						
Prep Date:		Analysis Date: 8/24/2012		SeqNo: 144786		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								
Carbon disulfide	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								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5105	RunNo:	5105					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144786	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

2-Hexanone
Isopropylbenzene
4-Isopropyltoluene
4-Methyl-2-pentanone
Methylene Chloride
n-Butylbenzene
n-Propylbenzene
sec-Butylbenzene
Styrene
tert-Butylbenzene
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethene (PCE)
trans-1,2-DCE
trans-1,3-Dichloropropene
1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene (TCE)
Trichlorofluoromethane
1,2,3-Trichloropropane
Vinyl chloride
Xylenes, Total
Surr: 1,2-Dichloroethane-d4
Surr: 4-Bromofluorobenzene
Surr: Dibromofluoromethane
Surr: Toluene-d8

ND 10
ND 1.0
ND 1.0
ND 10
ND 3.0
ND 3.0
ND 1.0
ND 1.0
ND 1.0
ND 1.0
ND 1.0
ND 2.0
ND 1.0
ND 1.0
ND 1.0
ND 1.0
ND 1.0
ND 1.0
ND 1.0
ND 2.0
ND 1.0
ND 1.5
10 10.00 100 70 130
10 10.00 101 70 130
10 10.00 101 70 130
10 10.00 103 70 130

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5105	RunNo:	5105					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144788	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene
Toluene
Chlorobenzene
1,1-Dichloroethene
Trichloroethene (TCE)
Surr: 1,2-Dichloroethane-d4
Surr: 4-Bromofluorobenzene

20 1.0 20.00 0 99.4 70 130
21 1.0 20.00 0 104 80 120
21 1.0 20.00 0 106 70 130
20 1.0 20.00 0 99.0 73.7 122
18 1.0 20.00 0 90.9 70 130
9.7 10.00 97.0 70 130
10 10.00 100 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 |
| P Sample pH greater than 2 | R RPD outside accepted recovery limits |

QC SUMMARY REPORT

Wall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5105	RunNo:	5105					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144788	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3477	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3477	RunNo:	5155					
Prep Date:	8/24/2012	Analysis Date:	8/28/2012	SeqNo:	146454	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								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3477	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3477	RunNo:	5155					
Prep Date:	8/24/2012	Analysis Date:	8/28/2012	SeqNo:	146454	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
o-aniline	ND	10								
o-nitroaniline	ND	10								
4-Nitroaniline	ND	20								
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: 2,4,6-Tribromophenol	110		200.0		55.0	44.2	126			
Surr: 2-Fluorobiphenyl	43		100.0		43.1	37	114			
Surr: 2-Fluorophenol	78		200.0		38.9	23.4	98			
Surr: 4-Terphenyl-d14	47		100.0		46.6	41.3	116			
Surr: Nitrobenzene-d5	45		100.0		44.9	39.5	118			
Surr: Phenol-d5	62		200.0		31.0	20.9	95.9			

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	lcs-3477	SampType:	LCS	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSW	Batch ID:	3477	RunNo:	5155					
Prep Date:	8/24/2012	Analysis Date:	8/28/2012	SeqNo:	146456	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	60.4	38.2	99.4			
4-Chloro-3-methylphenol	150	10	200.0	0	73.7	35.5	108			
2-Chlorophenol	120	10	200.0	0	58.5	29.8	106			
1,4-Dichlorobenzene	49	10	100.0	0	49.3	32.6	91.5			
2,4-Dinitrotoluene	67	10	100.0	0	67.2	44.7	112			
N-Nitrosodi-n-propylamine	72	10	100.0	0	71.5	38.5	105			
4-Nitrophenol	94	10	200.0	0	47.2	11.6	73.1			
Pentachlorophenol	130	20	200.0	0	63.4	20.2	93			
Phenol	94	10	200.0	0	47.1	23	66.1			
Pyrene	60	10	100.0	0	59.8	40.1	101			
1,2,4-Trichlorobenzene	52	10	100.0	0	52.3	37.7	99.1			
Surr: 2,4,6-Tribromophenol	170		200.0		87.2	44.2	126			
Surr: 2-Fluorobiphenyl	65		100.0		64.7	37	114			
Surr: 2-Fluorophenol	110		200.0		52.9	23.4	98			
Surr: 4-Terphenyl-d14	72		100.0		72.2	41.3	116			
Surr: Nitrobenzene-d5	61		100.0		60.5	39.5	118			
Surr: Phenol-d5	97		200.0		48.5	20.9	95.9			

Sample ID	lcsd-3477	SampType:	LCSd	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID:	3477	RunNo:	5155					
Prep Date:	8/24/2012	Analysis Date:	8/28/2012	SeqNo:	146458	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.1	38.2	99.4	7.42	20	
4-Chloro-3-methylphenol	150	10	200.0	0	76.2	35.5	108	3.38	20	
2-Chlorophenol	120	10	200.0	0	61.2	29.8	106	4.43	20	
1,4-Dichlorobenzene	50	10	100.0	0	50.1	32.6	91.5	1.61	20	
2,4-Dinitrotoluene	80	10	100.0	0	80.0	44.7	112	17.4	20	
N-Nitrosodi-n-propylamine	69	10	100.0	0	69.5	38.5	105	2.89	20	
4-Nitrophenol	110	10	200.0	0	55.7	11.6	73.1	16.4	20	
Pentachlorophenol	150	20	200.0	0	73.7	20.2	93	15.1	20	
Phenol	93	10	200.0	0	46.5	23	66.1	1.37	20	
Pyrene	65	10	100.0	0	65.1	40.1	101	8.43	20	
1,2,4-Trichlorobenzene	59	10	100.0	0	58.7	37.7	99.1	11.4	20	
Surr: 2,4,6-Tribromophenol	180		200.0		92.0	44.2	126	0	0	
Surr: 2-Fluorobiphenyl	69		100.0		69.3	37	114	0	0	
Surr: 2-Fluorophenol	110		200.0		52.6	23.4	98	0	0	
Surr: 4-Terphenyl-d14	75		100.0		75.1	41.3	116	0	0	
Surr: Nitrobenzene-d5	68		100.0		68.5	39.5	118	0	0	
Surr: Phenol-d5	92		200.0		46.2	20.9	95.9	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3456	SampType:	MBLK	TestCode:	SM5210B: BOD					
Client ID:	PBW	Batch ID:	3456	RunNo:	5122					
Prep Date:	8/23/2012	Analysis Date:	8/28/2012	SeqNo:	145574	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-3456	SampType:	MBLK	TestCode:	SM5210B: BOD					
Client ID:	PBW	Batch ID:	3456	RunNo:	5122					
Prep Date:	8/23/2012	Analysis Date:	8/28/2012	SeqNo:	145575	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-3456	SampType:	LCS	TestCode:	SM5210B: BOD					
Client ID:	LCSW	Batch ID:	3456	RunNo:	5122					
Prep Date:	8/23/2012	Analysis Date:	8/28/2012	SeqNo:	145576	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	180	2.0	198.0	0	92.9	84.6	115.4			

Sample ID	LCSD-3456	SampType:	LCSD	TestCode:	SM5210B: BOD					
Client ID:	LCSS02	Batch ID:	3456	RunNo:	5122					
Prep Date:	8/23/2012	Analysis Date:	8/28/2012	SeqNo:	145577	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	180	2.0	198.0	0	93.4	84.6	115.4	0.542	20	

Sample ID	1208937-002ADUP	SampType:	DUP	TestCode:	SM5210B: BOD					
Client ID:	BatchQC	Batch ID:	3456	RunNo:	5122					
Prep Date:	8/23/2012	Analysis Date:	8/28/2012	SeqNo:	145582	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	62	2.0						0.0962	20	

Notes:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208990

24-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208773-001c dup	SampType:	dup	TestCode:	SM4500-H+B: pH						
Client ID:	BatchQC	Batch ID:	R5115	RunNo:	5115						
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145248	Units:	pH units				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH		7.89	1.68								H

Sample ID	1208774-001b dup	SampType:	dup	TestCode:	SM4500-H+B: pH						
Client ID:	BatchQC	Batch ID:	R5115	RunNo:	5115						
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145265	Units:	pH units				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH		7.84	1.68								H

Sample ID	1208942-001a dup	SampType:	dup	TestCode:	SM4500-H+B: pH						
Client ID:	BatchQC	Batch ID:	R5115	RunNo:	5115						
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	145278	Units:	pH units				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH		7.66	1.68								H

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits



Hall Environmental Analysis Laboratory
4901 Hawks NE
Albuquerque, NM 87105
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: 1208990

Received by/date: AT 08/22/12

Logged By: Anne Thorne 8/22/2012 1:22:00 PM

Completed By: Anne Thorne 8/22/2012

Reviewed By: [Signature] 08/22/12

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 5
(≤ 2 or > 12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

17. 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: _____

18. Additional remarks:

19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining

Mailing Address:

Rt 3 Box 7

Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☐ Rush

Project Name

3rd QTR 2012 Groundwater

Project #:

Annual Sampling

Project Manager:

Cheryl Johnson

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

Date Time Matrix Sample Request ID

Container Type and #

Preservative Type

HEAL No.

1208990

Infl to At-1

GW

Infl to AL-2

GW

Infl to EP-1

W

Field Blank

W

Tap-Blank

Date

Time

Relinquished by:

Received by:

Date

Time

Date

Time

Relinquished by:

Received by:

Date

Time

Remarks:

N10 TB / A-08/22/12

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

8015B (DRO/GRO) WQCC Metals (Total and Dissolved)

Air Bubbles (Y or N)



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

September 25, 2012

Cheryl Johnson

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-0231

FAX (505) 722-0210

RE: 3rd QTR 2012 Groundwater Sampling

OrderNo.: 1208B31

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/24/2012 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. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. 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.

Sincerely,

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

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

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

Lab Order 1208B31

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup**Client Sample ID:** OW-11**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/22/2012 9:25:00 AM**Lab ID:** 1208B31-001**Matrix:** AQUEOUS**Received Date:** 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	1.7	0.10		mg/L	1	8/27/2012 4:37:02 PM
Chloride	82	10		mg/L	20	8/27/2012 4:49:27 PM
Bromide	0.21	0.10		mg/L	1	8/27/2012 4:37:02 PM
Phosphorus, Orthophosphate (As P)	ND	10	H	mg/L	20	8/27/2012 4:49:27 PM
Sulfate	940	25		mg/L	50	9/5/2012 8:30:56 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/28/2012 11:17:02 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.0084	0.0020		mg/L	1	9/12/2012 8:33:35 PM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 8:33:35 PM
Calcium	11	1.0		mg/L	1	9/12/2012 8:33:35 PM
Chromium	ND	0.0060		mg/L	1	9/12/2012 8:33:35 PM
Copper	ND	0.0060		mg/L	1	9/12/2012 8:33:35 PM
Iron	ND	0.020		mg/L	1	9/12/2012 8:33:35 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 8:33:35 PM
Magnesium	1.3	1.0		mg/L	1	9/12/2012 8:33:35 PM
Manganese	0.012	0.0020		mg/L	1	9/12/2012 8:33:35 PM
Potassium	2.0	1.0		mg/L	1	9/12/2012 8:33:35 PM
Silver	ND	0.0050		mg/L	1	9/12/2012 8:33:35 PM
Sodium	640	10		mg/L	10	9/13/2012 11:41:19 AM
Zinc	0.024	0.010		mg/L	1	9/12/2012 8:33:35 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.0086	0.0020		mg/L	1	9/11/2012 11:09:00 AM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 11:09:00 AM
Chromium	ND	0.0060		mg/L	1	9/11/2012 11:09:00 AM
Copper	ND	0.0060		mg/L	1	9/11/2012 11:09:00 AM
Iron	0.041	0.020		mg/L	1	9/11/2012 11:09:00 AM
Lead	ND	0.0050		mg/L	1	9/11/2012 11:09:00 AM
Manganese	0.095	0.0020	*	mg/L	1	9/11/2012 11:09:00 AM
Silver	ND	0.0050		mg/L	1	9/11/2012 11:09:00 AM
Zinc	ND	0.010		mg/L	1	9/11/2012 11:09:00 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0021	0.0010		mg/L	1	9/11/2012 12:20:44 PM
Selenium	0.0034	0.0010		mg/L	1	9/11/2012 12:20:44 PM
Uranium	0.21	0.010	*	mg/L	10	9/11/2012 3:10:00 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 6:39:58 PM
Selenium	0.0032	0.0025		mg/L	2.5	9/6/2012 6:39:58 PM
Uranium	0.22	0.0050	*	mg/L	5	9/13/2012 2:13:19 PM
EPA METHOD 245.1: MERCURY						Analyst: TES

Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-11

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/22/2012 9:25:00 AM

Lab ID: 1208B31-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 245.1: MERCURY						Analyst: TES
Mercury	ND	0.00020		mg/L	1	9/11/2012 1:40:30 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Acenaphthylene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Aniline	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Anthracene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Azobenzene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Benz(a)anthracene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Benzoic acid	ND	20		µg/L	1	8/29/2012 6:21:06 PM
Benzyl alcohol	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/29/2012 6:21:06 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Carbazole	ND	10		µg/L	1	8/29/2012 6:21:06 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/29/2012 6:21:06 PM
4-Chloroaniline	ND	10		µg/L	1	8/29/2012 6:21:06 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
2-Chlorophenol	ND	10		µg/L	1	8/29/2012 6:21:06 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Chrysene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Dibenzofuran	ND	10		µg/L	1	8/29/2012 6:21:06 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
1,4-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Diethyl phthalate	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Dimethyl phthalate	ND	10		µg/L	1	8/29/2012 6:21:06 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/29/2012 6:21:06 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/29/2012 6:21:06 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/29/2012 6:21:06 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/29/2012 6:21:06 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-11

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/22/2012 9:25:00 AM

Lab ID: 1208B31-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
2,4-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Fluoranthene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Fluorene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Hexachlorobenzene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Hexachloroethane	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Isophorone	ND	10		µg/L	1	8/29/2012 6:21:06 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
2-Methylphenol	ND	10		µg/L	1	8/29/2012 6:21:06 PM
3+4-Methylphenol	ND	10		µg/L	1	8/29/2012 6:21:06 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/29/2012 6:21:06 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/29/2012 6:21:06 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Naphthalene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
2-Nitroaniline	ND	10		µg/L	1	8/29/2012 6:21:06 PM
3-Nitroaniline	ND	10		µg/L	1	8/29/2012 6:21:06 PM
4-Nitroaniline	ND	20		µg/L	1	8/29/2012 6:21:06 PM
Nitrobenzene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
2-Nitrophenol	ND	10		µg/L	1	8/29/2012 6:21:06 PM
4-Nitrophenol	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Pentachlorophenol	ND	20		µg/L	1	8/29/2012 6:21:06 PM
Phenanthrene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Phenol	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Pyrene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Pyridine	ND	10		µg/L	1	8/29/2012 6:21:06 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/29/2012 6:21:06 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/29/2012 6:21:06 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/29/2012 6:21:06 PM
Surr: 2,4,6-Tribromophenol	86.9	44.2-126		%REC	1	8/29/2012 6:21:06 PM
Surr: 2-Fluorobiphenyl	75.6	37-114		%REC	1	8/29/2012 6:21:06 PM
Surr: 2-Fluorophenol	53.8	23.4-98		%REC	1	8/29/2012 6:21:06 PM
Surr: 4-Terphenyl-d14	74.9	41.3-116		%REC	1	8/29/2012 6:21:06 PM
Surr: Nitrobenzene-d5	80.6	39.5-118		%REC	1	8/29/2012 6:21:06 PM
Surr: Phenol-d5	43.3	20.9-95.9		%REC	1	8/29/2012 6:21:06 PM
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Benzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Toluene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
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- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-11

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/22/2012 9:25:00 AM

Lab ID: 1208B31-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Ethylbenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Naphthalene	ND	2.0		µg/L	1	8/29/2012 4:21:20 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/29/2012 4:21:20 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/29/2012 4:21:20 AM
Acetone	ND	10		µg/L	1	8/29/2012 4:21:20 AM
Bromobenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Bromodichloromethane	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Bromoform	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Bromomethane	ND	3.0		µg/L	1	8/29/2012 4:21:20 AM
2-Butanone	ND	10		µg/L	1	8/29/2012 4:21:20 AM
Carbon disulfide	ND	10		µg/L	1	8/29/2012 4:21:20 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Chlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Chloroethane	ND	2.0		µg/L	1	8/29/2012 4:21:20 AM
Chloroform	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Chloromethane	ND	3.0		µg/L	1	8/29/2012 4:21:20 AM
2-Chlorotoluene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
4-Chlorotoluene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
cis-1,2-DCE	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/29/2012 4:21:20 AM
Dibromochloromethane	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Dibromomethane	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/29/2012 4:21:20 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
2-Hexanone	ND	10		µg/L	1	8/29/2012 4:21:20 AM
Isopropylbenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-11

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/22/2012 9:25:00 AM

Lab ID: 1208B31-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
4-Methyl-2-pentanone	ND	10		µg/L	1	8/29/2012 4:21:20 AM
Methylene Chloride	ND	3.0		µg/L	1	8/29/2012 4:21:20 AM
n-Butylbenzene	ND	3.0		µg/L	1	8/29/2012 4:21:20 AM
n-Propylbenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
sec-Butylbenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Styrene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
tert-Butylbenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/29/2012 4:21:20 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
trans-1,2-DCE	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/29/2012 4:21:20 AM
Vinyl chloride	ND	1.0		µg/L	1	8/29/2012 4:21:20 AM
Xylenes, Total	ND	1.5		µg/L	1	8/29/2012 4:21:20 AM
Surr: 1,2-Dichloroethane-d4	95.3	70-130		%REC	1	8/29/2012 4:21:20 AM
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	8/29/2012 4:21:20 AM
Surr: Dibromofluoromethane	100	70-130		%REC	1	8/29/2012 4:21:20 AM
Surr: Toluene-d8	96.1	70-130		%REC	1	8/29/2012 4:21:20 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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

Lab Order 1208B31

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup**Client Sample ID:** OW-12**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/22/2012 6:45:00 AM**Lab ID:** 1208B31-002**Matrix:** AQUEOUS**Received Date:** 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.48	0.10		mg/L	1	8/27/2012 5:01:52 PM
Chloride	16	10		mg/L	20	8/27/2012 5:14:17 PM
Bromide	0.13	0.10		mg/L	1	8/27/2012 5:01:52 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/27/2012 5:01:52 PM
Sulfate	150	10		mg/L	20	8/27/2012 5:14:17 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/28/2012 11:29:27 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.021	0.0020		mg/L	1	9/12/2012 8:41:29 PM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 8:41:29 PM
Calcium	1.8	1.0		mg/L	1	9/12/2012 8:41:29 PM
Chromium	ND	0.0060		mg/L	1	9/12/2012 8:41:29 PM
Copper	ND	0.0060		mg/L	1	9/12/2012 8:41:29 PM
Iron	0.053	0.020		mg/L	1	9/12/2012 8:41:29 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 8:41:29 PM
Magnesium	ND	1.0		mg/L	1	9/12/2012 8:41:29 PM
Manganese	0.0033	0.0020		mg/L	1	9/12/2012 8:41:29 PM
Potassium	ND	1.0		mg/L	1	9/12/2012 8:41:29 PM
Silver	ND	0.0050		mg/L	1	9/12/2012 8:41:29 PM
Sodium	270	5.0		mg/L	5	9/12/2012 8:45:28 PM
Zinc	0.031	0.010		mg/L	1	9/12/2012 8:41:29 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.028	0.0020		mg/L	1	9/11/2012 11:25:57 AM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 11:25:57 AM
Chromium	ND	0.0060		mg/L	1	9/11/2012 11:25:57 AM
Copper	ND	0.0060		mg/L	1	9/11/2012 11:25:57 AM
Iron	0.29	0.020		mg/L	1	9/11/2012 11:25:57 AM
Lead	ND	0.0050		mg/L	1	9/11/2012 11:25:57 AM
Manganese	0.013	0.0020		mg/L	1	9/11/2012 11:25:57 AM
Silver	ND	0.0050		mg/L	1	9/11/2012 11:25:57 AM
Zinc	ND	0.010		mg/L	1	9/11/2012 11:25:57 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0018	0.0010		mg/L	1	9/11/2012 12:24:40 PM
Selenium	ND	0.0010		mg/L	1	9/11/2012 12:24:40 PM
Uranium	0.012	0.0010		mg/L	1	9/11/2012 12:24:40 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 6:41:51 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:41:51 PM
Uranium	0.012	0.0025		mg/L	2.5	9/13/2012 2:09:34 PM
EPA METHOD 245.1: MERCURY						Analyst: TES

Qualifiers: * Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2
RL Reporting Detection Limit

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-12

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/22/2012 6:45:00 AM

Lab ID: 1208B31-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 245.1: MERCURY						Analyst: TES
Mercury	ND	0.00020		mg/L	1	9/11/2012 1:42:17 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Acenaphthylene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Aniline	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Anthracene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Azobenzene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Benz(a)anthracene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Benzoic acid	ND	20		µg/L	1	8/29/2012 6:51:11 PM
Benzyl alcohol	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/29/2012 6:51:11 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Carbazole	ND	10		µg/L	1	8/29/2012 6:51:11 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/29/2012 6:51:11 PM
4-Chloroaniline	ND	10		µg/L	1	8/29/2012 6:51:11 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
2-Chlorophenol	ND	10		µg/L	1	8/29/2012 6:51:11 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Chrysene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Dibenzofuran	ND	10		µg/L	1	8/29/2012 6:51:11 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
1,4-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Diethyl phthalate	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Dimethyl phthalate	ND	10		µg/L	1	8/29/2012 6:51:11 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/29/2012 6:51:11 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/29/2012 6:51:11 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/29/2012 6:51:11 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/29/2012 6:51:11 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-12

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/22/2012 6:45:00 AM

Lab ID: 1208B31-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
2,4-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Fluoranthene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Fluorene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Hexachlorobenzene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Hexachloroethane	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Isophorone	ND	10		µg/L	1	8/29/2012 6:51:11 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
2-Methylphenol	ND	10		µg/L	1	8/29/2012 6:51:11 PM
3+4-Methylphenol	ND	10		µg/L	1	8/29/2012 6:51:11 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/29/2012 6:51:11 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/29/2012 6:51:11 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Naphthalene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
2-Nitroaniline	ND	10		µg/L	1	8/29/2012 6:51:11 PM
3-Nitroaniline	ND	10		µg/L	1	8/29/2012 6:51:11 PM
4-Nitroaniline	ND	20		µg/L	1	8/29/2012 6:51:11 PM
Nitrobenzene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
2-Nitrophenol	ND	10		µg/L	1	8/29/2012 6:51:11 PM
4-Nitrophenol	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Pentachlorophenol	ND	20		µg/L	1	8/29/2012 6:51:11 PM
Phenanthrene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Phenol	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Pyrene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Pyridine	ND	10		µg/L	1	8/29/2012 6:51:11 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/29/2012 6:51:11 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/29/2012 6:51:11 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/29/2012 6:51:11 PM
Surr: 2,4,6-Tribromophenol	86.4	44.2-126		%REC	1	8/29/2012 6:51:11 PM
Surr: 2-Fluorobiphenyl	70.5	37-114		%REC	1	8/29/2012 6:51:11 PM
Surr: 2-Fluorophenol	51.6	23.4-98		%REC	1	8/29/2012 6:51:11 PM
Surr: 4-Terphenyl-d14	71.2	41.3-116		%REC	1	8/29/2012 6:51:11 PM
Surr: Nitrobenzene-d5	79.4	39.5-118		%REC	1	8/29/2012 6:51:11 PM
Surr: Phenol-d5	42.1	20.9-95.9		%REC	1	8/29/2012 6:51:11 PM
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Benzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Toluene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-12

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/22/2012 6:45:00 AM

Lab ID: 1208B31-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Ethylbenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Naphthalene	ND	2.0		µg/L	1	8/29/2012 4:50:44 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/29/2012 4:50:44 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/29/2012 4:50:44 AM
Acetone	ND	10		µg/L	1	8/29/2012 4:50:44 AM
Bromobenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Bromodichloromethane	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Bromoform	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Bromomethane	ND	3.0		µg/L	1	8/29/2012 4:50:44 AM
2-Butanone	ND	10		µg/L	1	8/29/2012 4:50:44 AM
Carbon disulfide	ND	10		µg/L	1	8/29/2012 4:50:44 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Chlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Chloroethane	ND	2.0		µg/L	1	8/29/2012 4:50:44 AM
Chloroform	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Chloromethane	ND	3.0		µg/L	1	8/29/2012 4:50:44 AM
2-Chlorotoluene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
4-Chlorotoluene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
cis-1,2-DCE	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/29/2012 4:50:44 AM
Dibromochloromethane	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Dibromomethane	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/29/2012 4:50:44 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
2-Hexanone	ND	10		µg/L	1	8/29/2012 4:50:44 AM
Isopropylbenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-12

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/22/2012 6:45:00 AM

Lab ID: 1208B31-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
4-Methyl-2-pentanone	ND	10		µg/L	1	8/29/2012 4:50:44 AM
Methylene Chloride	ND	3.0		µg/L	1	8/29/2012 4:50:44 AM
n-Butylbenzene	ND	3.0		µg/L	1	8/29/2012 4:50:44 AM
n-Propylbenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
sec-Butylbenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Styrene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
tert-Butylbenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/29/2012 4:50:44 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
trans-1,2-DCE	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/29/2012 4:50:44 AM
Vinyl chloride	ND	1.0		µg/L	1	8/29/2012 4:50:44 AM
Xylenes, Total	ND	1.5		µg/L	1	8/29/2012 4:50:44 AM
Surr: 1,2-Dichloroethane-d4	93.4	70-130		%REC	1	8/29/2012 4:50:44 AM
Surr: 4-Bromofluorobenzene	108	70-130		%REC	1	8/29/2012 4:50:44 AM
Surr: Dibromofluoromethane	100	70-130		%REC	1	8/29/2012 4:50:44 AM
Surr: Toluene-d8	98.5	70-130		%REC	1	8/29/2012 4:50:44 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/22/2012 9:35:00 AM

Lab ID: 1208B31-003

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Benzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Toluene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Ethylbenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Naphthalene	ND	2.0		µg/L	1	8/29/2012 5:20:13 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/29/2012 5:20:13 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/29/2012 5:20:13 AM
Acetone	ND	10		µg/L	1	8/29/2012 5:20:13 AM
Bromobenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Bromodichloromethane	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Bromoform	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Bromomethane	ND	3.0		µg/L	1	8/29/2012 5:20:13 AM
2-Butanone	ND	10		µg/L	1	8/29/2012 5:20:13 AM
Carbon disulfide	ND	10		µg/L	1	8/29/2012 5:20:13 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Chlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Chloroethane	ND	2.0		µg/L	1	8/29/2012 5:20:13 AM
Chloroform	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Chloromethane	ND	3.0		µg/L	1	8/29/2012 5:20:13 AM
2-Chlorotoluene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
4-Chlorotoluene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
cis-1,2-DCE	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/29/2012 5:20:13 AM
Dibromochloromethane	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Dibromomethane	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/29/2012 5:20:13 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
2-Hexanone	ND	10		µg/L	1	8/29/2012 5:20:13 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/22/2012 9:35:00 AM

Lab ID: 1208B31-003

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Isopropylbenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/29/2012 5:20:13 AM
Methylene Chloride	ND	3.0		µg/L	1	8/29/2012 5:20:13 AM
n-Butylbenzene	ND	3.0		µg/L	1	8/29/2012 5:20:13 AM
n-Propylbenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
sec-Butylbenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Styrene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
tert-Butylbenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/29/2012 5:20:13 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
trans-1,2-DCE	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/29/2012 5:20:13 AM
Vinyl chloride	ND	1.0		µg/L	1	8/29/2012 5:20:13 AM
Xylenes, Total	ND	1.5		µg/L	1	8/29/2012 5:20:13 AM
Surr: 1,2-Dichloroethane-d4	95.4	70-130		%REC	1	8/29/2012 5:20:13 AM
Surr: 4-Bromofluorobenzene	99.9	70-130		%REC	1	8/29/2012 5:20:13 AM
Surr: Dibromofluoromethane	104	70-130		%REC	1	8/29/2012 5:20:13 AM
Surr: Toluene-d8	95.0	70-130		%REC	1	8/29/2012 5:20:13 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** Trip Blank**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:****Lab ID:** 1208B31-004**Matrix:** AQUEOUS**Received Date:** 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Benzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Toluene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Ethylbenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Naphthalene	ND	2.0		µg/L	1	8/29/2012 5:49:25 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/29/2012 5:49:25 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/29/2012 5:49:25 AM
Acetone	ND	10		µg/L	1	8/29/2012 5:49:25 AM
Bromobenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Bromodichloromethane	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Bromoform	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Bromomethane	ND	3.0		µg/L	1	8/29/2012 5:49:25 AM
2-Butanone	ND	10		µg/L	1	8/29/2012 5:49:25 AM
Carbon disulfide	ND	10		µg/L	1	8/29/2012 5:49:25 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Chlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Chloroethane	ND	2.0		µg/L	1	8/29/2012 5:49:25 AM
Chloroform	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Chloromethane	ND	3.0		µg/L	1	8/29/2012 5:49:25 AM
2-Chlorotoluene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
4-Chlorotoluene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
cis-1,2-DCE	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/29/2012 5:49:25 AM
Dibromochloromethane	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Dibromomethane	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/29/2012 5:49:25 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
2-Hexanone	ND	10		µg/L	1	8/29/2012 5:49:25 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B31

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** Trip Blank**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:****Lab ID:** 1208B31-004**Matrix:** AQUEOUS**Received Date:** 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: JDJ
Isopropylbenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/29/2012 5:49:25 AM
Methylene Chloride	ND	3.0		µg/L	1	8/29/2012 5:49:25 AM
n-Butylbenzene	ND	3.0		µg/L	1	8/29/2012 5:49:25 AM
n-Propylbenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
sec-Butylbenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Styrene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
tert-Butylbenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/29/2012 5:49:25 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
trans-1,2-DCE	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/29/2012 5:49:25 AM
Vinyl chloride	ND	1.0		µg/L	1	8/29/2012 5:49:25 AM
Xylenes, Total	ND	1.5		µg/L	1	8/29/2012 5:49:25 AM
Surr: 1,2-Dichloroethane-d4	95.2	70-130		%REC	1	8/29/2012 5:49:25 AM
Surr: 4-Bromofluorobenzene	101	70-130		%REC	1	8/29/2012 5:49:25 AM
Surr: Dibromofluoromethane	97.5	70-130		%REC	1	8/29/2012 5:49:25 AM
Surr: Toluene-d8	96.2	70-130		%REC	1	8/29/2012 5:49:25 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3525	SampType:	MBLK		TestCode:	EPA Method 200.7: Metals				
Client ID:	PBW	Batch ID:	3525		RunNo:	5189				
Prep Date:	8/29/2012	Analysis Date:	8/29/2012		SeqNo:	147585	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-3525		SampType:	LCS		TestCode:	EPA Method 200.7: Metals				
Client ID:	LCSW		Batch ID:	3525		RunNo:	5189				
Prep Date:	8/29/2012		Analysis Date:	8/29/2012		SeqNo:	147586		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Barium	0.48	0.0020	0.5000	0	95.5	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.1	85	115			
Chromium	0.47	0.0060	0.5000	0	94.3	85	115			
Copper	0.48	0.0060	0.5000	0	96.7	85	115			
Iron	0.46	0.020	0.5000	0	92.4	85	115			
Manganese	0.47	0.0020	0.5000	0	93.1	85	115			
Silver	0.091	0.0050	0.1000	0	90.7	85	115			
Zinc	0.45	0.010	0.5000	0.003020	89.7	85	115			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals					
Client ID:	PBW	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157472	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Sodium	ND	1.0								
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Sample ID	LCS		SampType:	LCS		TestCode:	EPA Method 200.7: Metals				
Client ID:	LCSW		Batch ID:	R5512		RunNo:	5512				
Prep Date:			Analysis Date:	9/13/2012		SeqNo:	157473		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Sodium	50	1.0	50.00	0	101	85	115			
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Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	155926	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								
Lead	ND	0.0050								
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:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	155927	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	0.51	0.0020	0.5000	0	101	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.50	0.020	0.5000	0.002590	99.7	85	115			
Lead	0.50	0.0050	0.5000	0	100	85	115			
Magnesium	53	1.0	50.00	0	106	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	52	1.0	50.00	0	105	85	115			
Zinc	0.49	0.010	0.5000	0	99.0	85	115			

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156329	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.65	0.0020	0.5000	0.1271	105	70	130			
Cadmium	0.53	0.0020	0.5000	0	105	70	130			
Chromium	0.52	0.0060	0.5000	0.001070	103	70	130			
Copper	0.56	0.0060	0.5000	0	112	70	130			

Comments:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH greater than 2
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit
- RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156329	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.56	0.020	0.5000	0.04012	104	70	130			
Lead	0.51	0.0050	0.5000	0	102	70	130			
Magnesium	69	1.0	50.00	13.55	112	70	130			
Manganese	0.53	0.0020	0.5000	0.0006300	106	70	130			
Potassium	56	1.0	50.00	2.284	108	70	130			
Silver	0.10	0.0050	0.1000	0	103	70	130			
Sodium	83	1.0	50.00	27.29	111	70	130			
Zinc	0.52	0.010	0.5000	0.01358	101	70	130			

Sample ID	1208996-003DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156330	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.63	0.0020	0.5000	0.1271	101	70	130	3.05	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	2.73	20	
Chromium	0.50	0.0060	0.5000	0.001070	99.7	70	130	3.48	20	
Copper	0.55	0.0060	0.5000	0	110	70	130	1.68	20	
Iron	0.56	0.020	0.5000	0.04012	103	70	130	0.424	20	
Lead	0.50	0.0050	0.5000	0	99.2	70	130	2.65	20	
Magnesium	68	1.0	50.00	13.55	109	70	130	1.63	20	
Manganese	0.52	0.0020	0.5000	0.0006300	103	70	130	2.93	20	
Potassium	55	1.0	50.00	2.284	106	70	130	1.53	20	
Silver	0.099	0.0050	0.1000	0	99.4	70	130	3.30	20	
Sodium	82	1.0	50.00	27.29	109	70	130	0.982	20	
Zinc	0.50	0.010	0.5000	0.01358	96.5	70	130	4.24	20	

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156332	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	370	5.0	250.0	66.77	122	70	130			

Sample ID	1208996-003DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156333	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	330	5.0	250.0	66.77	106	70	130	11.7	20	

Qualifiers:

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

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156417	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								
Lead	ND	0.0050								
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:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156418	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.001060	97.0	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.3	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	95.5	85	115			
Copper	0.52	0.0060	0.5000	0	104	85	115			
Iron	0.50	0.020	0.5000	0.003080	99.0	85	115			
Lead	0.47	0.0050	0.5000	0	94.1	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Potassium	49	1.0	50.00	0	98.4	85	115			
Silver	0.10	0.0050	0.1000	0.001260	98.6	85	115			
Sodium	51	1.0	50.00	0	103	85	115			
Zinc	0.46	0.010	0.5000	0	92.6	85	115			

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156420	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0.007580	89.5	70	130			
Cadmium	0.46	0.0020	0.5000	0.001310	92.5	70	130			
Chromium	0.44	0.0060	0.5000	0	88.1	70	130			
Copper	0.55	0.0060	0.5000	0.04934	99.8	70	130			

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156420	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.47	0.020	0.5000	0.003920	92.6	70	130			
Magnesium	78	1.0	50.00	28.77	99.1	70	130			
Potassium	50	1.0	50.00	1.179	97.1	70	130			
Silver	0.093	0.0050	0.1000	0	93.0	70	130			
Sodium	60	1.0	50.00	9.466	102	70	130			
Zinc	0.90	0.010	0.5000	0.5237	75.6	70	130			

Sample ID	1208A83-002AMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156421	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0.007580	88.6	70	130	0.945	20	
Cadmium	0.46	0.0020	0.5000	0.001310	91.1	70	130	1.54	20	
Chromium	0.43	0.0060	0.5000	0	86.4	70	130	1.96	20	
Copper	0.55	0.0060	0.5000	0.04934	99.3	70	130	0.477	20	
Iron	0.46	0.020	0.5000	0.003920	91.1	70	130	1.62	20	
Magnesium	78	1.0	50.00	28.77	98.2	70	130	0.598	20	
Potassium	49	1.0	50.00	1.179	96.4	70	130	0.773	20	
Silver	0.093	0.0050	0.1000	0	93.1	70	130	0.150	20	
Sodium	60	1.0	50.00	9.466	101	70	130	0.803	20	
Zinc	0.89	0.010	0.5000	0.5237	72.8	70	130	1.59	20	

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156423	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130			
Manganese	4.3	0.010	2.500	1.779	99.4	70	130			

Sample ID	1208A83-002AMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156424	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130	0.395	20	
Manganese	4.3	0.010	2.500	1.779	102	70	130	1.46	20	

Qualifiers:

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

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208C13-006AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157513	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	61	1.0	50.00	10.91	99.6	70	130			

Sample ID	1208C13-006AMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157514	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	62	1.0	50.00	10.91	102	70	130	1.97	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157572	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:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157573	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	52	1.0	50.00	0.04813	104	85	115			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157633	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:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157634	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	101	85	115			

Comments:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3525	SampType:	MBLK	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	PBW	Batch ID:	3525	RunNo:	5189					
Prep Date:	8/29/2012	Analysis Date:	8/29/2012	SeqNo:	147561	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-3525	SampType:	LCS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	LCSW	Batch ID:	3525	RunNo:	5189					
Prep Date:	8/29/2012	Analysis Date:	8/29/2012	SeqNo:	147562	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	0.48	0.0020	0.5000	0	95.5	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.1	85	115			
Chromium	0.47	0.0060	0.5000	0	94.3	85	115			
Copper	0.48	0.0060	0.5000	0	96.7	85	115			
Iron	0.46	0.020	0.5000	0	92.4	85	115			
Manganese	0.47	0.0020	0.5000	0	93.1	85	115			
Silver	0.091	0.0050	0.1000	0	90.7	85	115			
Zinc	0.45	0.010	0.5000	0.003020	89.7	85	115			

Sample ID	1208B32-002EMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	3525	RunNo:	5404					
Prep Date:	8/29/2012	Analysis Date:	9/10/2012	SeqNo:	154044	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	0.54	0.0020	0.5000	0.03742	101	70	130			
Cadmium	0.52	0.0020	0.5000	0	104	70	130			
Chromium	0.51	0.0060	0.5000	0	101	70	130			
Copper	0.55	0.0060	0.5000	0	111	70	130			
Iron	0.53	0.020	0.5000	0.03049	101	70	130			
Lead	0.50	0.0050	0.5000	0	101	70	130			
Manganese	0.50	0.0020	0.5000	0.003420	99.3	70	130			
Silver	0.083	0.0050	0.1000	0	83.1	70	130			
Zinc	0.51	0.010	0.5000	0.004410	102	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B32-002EMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	3525	RunNo:	5404					
Prep Date:	8/29/2012	Analysis Date:	9/10/2012	SeqNo:	154045	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.54	0.0020	0.5000	0.03742	101	70	130	0.161	20	
Cadmium	0.52	0.0020	0.5000	0	104	70	130	0.150	20	
Chromium	0.50	0.0060	0.5000	0	100	70	130	0.617	20	
Copper	0.56	0.0060	0.5000	0	111	70	130	0.586	20	
Iron	0.54	0.020	0.5000	0.03049	102	70	130	0.996	20	
Lead	0.50	0.0050	0.5000	0	101	70	130	0.131	20	
Manganese	0.50	0.0020	0.5000	0.003420	99.5	70	130	0.180	20	
Silver	0.081	0.0050	0.1000	0	80.6	70	130	3.13	20	
Zinc	0.51	0.010	0.5000	0.004410	101	70	130	0.933	20	

Sample ID	MB-3525	SampType:	MBLK	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	PBW	Batch ID:	3525	RunNo:	5231					
Prep Date:	8/29/2012	Analysis Date:	8/30/2012	SeqNo:	159950	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0050								

Sample ID	LCS-3525	SampType:	LCS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	LCSW	Batch ID:	3525	RunNo:	5231					
Prep Date:	8/29/2012	Analysis Date:	8/30/2012	SeqNo:	159951	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.48	0.0050	0.5000	0	96.2	85	115			

Modifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3525		SampType:	MBLK		TestCode:	EPA 200.8: Metals			
Client ID:	PBW		Batch ID:	3525		RunNo:	5235			
Prep Date:	8/29/2012		Analysis Date:	8/30/2012		SeqNo:	148846		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								
Uranium	ND	0.0025								

Sample ID	LCS		SampType:	LCS		TestCode:	EPA 200.8: Metals			
Client ID:	LCSW		Batch ID:	R5425		RunNo:	5425			
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	154891		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	102	85	115			

Sample ID	MB		SampType:	MBLK		TestCode:	EPA 200.8: Metals			
Client ID:	PBW		Batch ID:	R5425		RunNo:	5425			
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	154893		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	1208932-004AMS		SampType:	MS		TestCode:	EPA 200.8: Metals			
Client ID:	BatchQC		Batch ID:	R5425		RunNo:	5425			
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155236		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.030	0.0010	0.02500	0.005874	96.1	70	130			
Selenium	0.026	0.0010	0.02500	0.002644	93.5	70	130			

Sample ID	1208C61-004AMS		SampType:	MS		TestCode:	EPA 200.8: Metals			
Client ID:	BatchQC		Batch ID:	R5425		RunNo:	5425			
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155243		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0.001791	98.5	70	130			
Selenium	0.027	0.0010	0.02500	0.002323	100	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Metals					
Client ID:	LCSW		Batch ID: R5425		RunNo: 5425					
Prep Date:			Analysis Date: 9/11/2012		SeqNo: 155260		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Sample ID	MB		SampType: MBLK		TestCode: EPA 200.8: Metals					
Client ID:	PBW		Batch ID: R5425		RunNo: 5425					
Prep Date:			Analysis Date: 9/11/2012		SeqNo: 155261		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Comments:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	LCSW		Batch ID:	R5425		RunNo:	5425				
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	154883		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115				
Selenium	0.025	0.0010	0.02500	0	101	85	115				
Uranium	0.025	0.0010	0.02500	0	102	85	115				

Sample ID	MB	SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	PBW	Batch ID:	R5425		RunNo:	5425				
Prep Date:		Analysis Date:	9/11/2012		SeqNo:	154885	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	1208C13-004AMS		SampType: MS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	BatchQC		Batch ID: R5425		RunNo: 5425					
Prep Date:			Analysis Date: 9/11/2012		SeqNo: 155231		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0.0002387	103	70	130			
Selenium	0.026	0.0010	0.02500	0.0004619	104	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3525	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3525	RunNo:	5235					
Prep Date:	8/29/2012	Analysis Date:	8/30/2012	SeqNo:	148879	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								
Uranium	ND	0.0025								

Modifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3672	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155037	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-3672	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155038	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			

Sample ID	1208B33-004EMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155059	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	75	125			

Sample ID	1208B33-004EMSD	SampType:	MSD	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3672	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155060	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0053	0.00020	0.005000	0	105	75	125	1.79	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5147	RunNo:	5147					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146216	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:	R5147	RunNo:	5147					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146217	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	93.9	90	110			
Chloride	4.6	0.50	5.000	0	91.9	90	110			
Bromide	2.4	0.10	2.500	0	94.6	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.8	90	110			
Sulfate	9.5	0.50	10.00	0	94.7	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.2	90	110			

Sample ID	1208B32-001CMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5147	RunNo:	5147					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146223	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.65	0.10	0.5000	0.2431	81.8	76.6	110			
Bromide	2.6	0.10	2.500	0.2557	92.0	83.3	107			

Sample ID	1208B32-001CMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5147	RunNo:	5147					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146224	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.66	0.10	0.5000	0.2431	83.3	76.6	110	1.12	20	
Bromide	2.6	0.10	2.500	0.2557	91.9	83.3	107	0.110	20	

Sample ID	1208B37-001BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5147	RunNo:	5147					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146231	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.66	0.10	0.5000	0.2474	83.2	76.6	110			
Bromide	2.6	0.10	2.500	0.3524	91.2	83.3	107			

Comments:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B37-001BMSD		SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC		Batch ID:	R5147		RunNo:	5147				
Prep Date:			Analysis Date:	8/27/2012		SeqNo:	146232		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	0.67	0.10	0.5000	0.2474	85.0	76.6	110	1.35	20		
Bromide	2.7	0.10	2.500	0.3524	92.0	83.3	107	0.827	20		

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5147	RunNo:	5147					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146268	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType: LCS		TestCode: EPA Method 300.0: Anions						
Client ID:	LCSW	Batch ID: R5147		RunNo: 5147						
Prep Date:		Analysis Date: 8/28/2012		SeqNo: 146269		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	94.3	90	110			
Bromide	2.4	0.10	2.500	0	96.0	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	100	90	110			
Sulfate	9.6	0.50	10.00	0	95.7	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.2	90	110			

Sample ID	1208B33-006CMS		SampType:	MS		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC		Batch ID:	R5147		RunNo:	5147				
Prep Date:			Analysis Date:	8/28/2012		SeqNo:	146277		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	1.5	0.10	0.5000	1.140	79.8	76.6	110				
Bromide	2.4	0.10	2.500	0.1141	90.6	83.3	107				

Sample ID	1208B33-006CMSD		SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC		Batch ID:	R5147		RunNo:	5147				
Prep Date:			Analysis Date:	8/28/2012		SeqNo:	146278		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	1.6	0.10	0.5000	1.140	83.5	76.6	110	1.20	20		
Bromide	2.4	0.10	2.500	0.1141	92.8	83.3	107	2.23	20		

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151555	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:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151556	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.8	0.50	10.00	0	98.0	90	110			

Sample ID	1209065-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151558	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	41	0.50	10.00	30.34	104	84.6	122			

Sample ID	1209065-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151559	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	41	0.50	10.00	30.34	105	84.6	122	0.241	20	

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5160	RunNo:	5160					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146523	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								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: 5ml rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5160		RunNo: 5160							
Prep Date:	Analysis Date: 8/28/2012		SeqNo: 146523		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
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		101	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.6	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	10		10.00		104	70	130			

Sample ID: 100ng lcsw	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R5160		RunNo: 5160							
Prep Date:	Analysis Date: 8/28/2012		SeqNo: 146524		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.9	70	130			
Toluene	21	1.0	20.00	0	105	80	120			
Chlorobenzene	21	1.0	20.00	0	103	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	97.1	73.7	122			
Trichloroethene (TCE)	18	1.0	20.00	0	90.5	70	130			
Surr: 1,2-Dichloroethane-d4	9.5		10.00		94.9	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		105	70	130			

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	100ng lcsd	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5160	RunNo:	5160					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146524	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	9.5		10.00		94.5	70	130			
Surr: Toluene-d8	9.4		10.00		93.6	70	130			

Sample ID	1208a91-001ams	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5160	RunNo:	5160					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146532	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	97.9	66.8	128			
Toluene	19	1.0	20.00	0	95.7	70	130			
Chlorobenzene	18	1.0	20.00	0	90.0	70	130			
1,1-Dichloroethene	21	1.0	20.00	0	104	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.1	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		101	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		109	70	130			
Surr: Dibromofluoromethane	9.7		10.00		96.6	70	130			
Surr: Toluene-d8	9.3		10.00		92.6	70	130			

Sample ID	1208a91-001amsd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5160	RunNo:	5160					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146533	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.1	66.8	128	2.89	16.7	
Toluene	19	1.0	20.00	0	92.7	70	130	3.16	18.7	
Chlorobenzene	19	1.0	20.00	0	97.1	70	130	7.54	19.5	
1,1-Dichloroethene	19	1.0	20.00	0	96.0	70	130	7.52	16.7	
Trichloroethene (TCE)	19	1.0	20.00	0	96.8	70	130	1.34	17.5	
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.2	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.5		10.00		95.2	70	130	0	0	
Surr: Dibromofluoromethane	9.1		10.00		90.8	70	130	0	0	
Surr: Toluene-d8	9.2		10.00		92.0	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3504	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3504	RunNo:	5185					
Prep Date:	8/28/2012	Analysis Date:	8/29/2012	SeqNo:	147346	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								
mophenyl phenyl ether	ND	10								
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								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3504	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3504	RunNo:	5185					
Prep Date:	8/28/2012	Analysis Date:	8/29/2012	SeqNo:	147346	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	20								
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: 2,4,6-Tribromophenol	180		200.0		88.0	44.2	126			
Surr: 2-Fluorobiphenyl	60		100.0		60.3	37	114			
Surr: 2-Fluorophenol	94		200.0		47.0	23.4	98			
Surr: 4-Terphenyl-d14	72		100.0		72.5	41.3	116			
Surr: Nitrobenzene-d5	59		100.0		58.9	39.5	118			
Surr: Phenol-d5	75		200.0		37.5	20.9	95.9			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B31

25-Sep-12

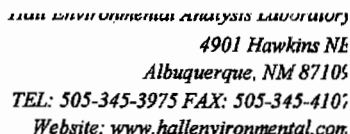
Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	Ics-3504		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 3504		RunNo: 5185					
Prep Date:	8/28/2012		Analysis Date: 8/29/2012		SeqNo: 147347		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	76	10	100.0	0	75.7	38.2	99.4			
4-Chloro-3-methylphenol	160	10	200.0	0	80.7	35.5	108			
2-Chlorophenol	160	10	200.0	0	78.0	29.8	106			
1,4-Dichlorobenzene	65	10	100.0	0	65.0	32.6	91.5			
2,4-Dinitrotoluene	92	10	100.0	0	92.2	44.7	112			
N-Nitrosodi-n-propylamine	78	10	100.0	0	78.2	38.5	105			
4-Nitrophenol	120	10	200.0	0	58.1	11.6	73.1			
Pentachlorophenol	180	20	200.0	0	88.2	20.2	93			
Phenol	99	10	200.0	0	49.4	23	66.1			
Pyrene	77	10	100.0	0	77.4	40.1	101			
1,2,4-Trichlorobenzene	71	10	100.0	0	71.2	37.7	99.1			
Surr: 2,4,6-Tribromophenol	210		200.0		105	44.2	126			
Surr: 2-Fluorobiphenyl	76		100.0		75.7	37	114			
Surr: 2-Fluorophenol	110		200.0		54.0	23.4	98			
Surr: 4-Terphenyl-d14	82		100.0		82.5	41.3	116			
Surr: Nitrobenzene-d5	80		100.0		80.2	39.5	118			
τ: Phenol-d5	96		200.0		48.2	20.9	95.9			

Sample ID	Icsd-3504		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 3504		RunNo: 5185					
Prep Date:	8/28/2012		Analysis Date: 8/29/2012		SeqNo: 147348		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	62.5	38.2	99.4	19.0	20	
4-Chloro-3-methylphenol	120	10	200.0	0	60.9	35.5	108	27.9	20	R
2-Chlorophenol	120	10	200.0	0	57.9	29.8	106	29.6	20	R
1,4-Dichlorobenzene	44	10	100.0	0	44.0	32.6	91.5	38.6	20	R
2,4-Dinitrotoluene	78	10	100.0	0	78.0	44.7	112	16.6	20	
N-Nitrosodi-n-propylamine	63	10	100.0	0	63.2	38.5	105	21.3	20	R
4-Nitrophenol	94	10	200.0	0	46.9	11.6	73.1	21.3	20	R
Pentachlorophenol	130	20	200.0	0	64.8	20.2	93	30.6	20	R
Phenol	71	10	200.0	0	35.7	23	66.1	32.2	20	R
Pyrene	65	10	100.0	0	65.2	40.1	101	17.0	20	
1,2,4-Trichlorobenzene	56	10	100.0	0	56.0	37.7	99.1	23.8	20	R
Surr: 2,4,6-Tribromophenol	150		200.0		74.9	44.2	126	0	0	
Surr: 2-Fluorobiphenyl	65		100.0		64.7	37	114	0	0	
Surr: 2-Fluorophenol	91		200.0		45.4	23.4	98	0	0	
Surr: 4-Terphenyl-d14	68		100.0		67.8	41.3	116	0	0	
Surr: Nitrobenzene-d5	62		100.0		62.5	39.5	118	0	0	
Surr: Phenol-d5	76		200.0		38.0	20.9	95.9	0	0	

Modifiers:

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



Page 1 of 1



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

September 25, 2012

Cheryl Johnson

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-0231

FAX (505) 722-0210

RE: 3rd QTR 2012 Groundwater Sampling

OrderNo.: 1208B35

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/24/2012 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. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. 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.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 8:46:07 AM

Lab ID: 1208B35-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/28/2012 5:09:51 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 5:09:51 AM
Surr: DNOP	135	79.5-166		%REC	1	8/28/2012 5:09:51 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	0.28	0.050		mg/L	1	8/30/2012 12:49:19 PM
Surr: BFB	1090	69.8-119	S	%REC	1	8/30/2012 12:49:19 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.16	0.10		mg/L	1	8/27/2012 8:50:11 PM
Chloride	2400	100		mg/L	200	9/5/2012 7:28:54 PM
Bromide	8.4	2.0		mg/L	20	8/27/2012 9:02:35 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/27/2012 8:50:11 PM
Sulfate	1600	25		mg/L	50	9/5/2012 7:16:30 PM
Nitrate+Nitrite as N	ND	2.0		mg/L	10	9/5/2012 7:41:19 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.016	0.0020		mg/L	1	9/12/2012 8:03:51 PM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 8:03:51 PM
Calcium	260	5.0		mg/L	5	9/12/2012 8:07:56 PM
Chromium	ND	0.0060		mg/L	1	9/12/2012 8:03:51 PM
Copper	ND	0.0060		mg/L	1	9/12/2012 8:03:51 PM
Iron	0.042	0.020		mg/L	1	9/12/2012 8:03:51 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 8:03:51 PM
Magnesium	84	1.0		mg/L	1	9/12/2012 8:03:51 PM
Manganese	0.22	0.0020	*	mg/L	1	9/12/2012 8:03:51 PM
Potassium	1.9	1.0		mg/L	1	9/12/2012 8:03:51 PM
Silver	ND	0.0050		mg/L	1	9/12/2012 8:03:51 PM
Sodium	2100	50		mg/L	50	9/13/2012 11:37:36 AM
Zinc	0.029	0.010		mg/L	1	9/12/2012 8:03:51 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: ELS
Barium	0.038	0.0020		mg/L	1	9/10/2012 9:32:01 AM
Cadmium	ND	0.0020		mg/L	1	9/10/2012 9:32:01 AM
Chromium	0.17	0.0060	*	mg/L	1	9/10/2012 9:32:01 AM
Copper	ND	0.0060		mg/L	1	9/10/2012 9:32:01 AM
Iron	1.5	0.10	*	mg/L	5	9/10/2012 9:34:50 AM
Lead	ND	0.0050		mg/L	1	9/10/2012 9:32:01 AM
Manganese	0.25	0.0020	*	mg/L	1	9/10/2012 9:32:01 AM
Silver	ND	0.0050		mg/L	1	9/11/2012 11:01:32 AM
Zinc	0.021	0.010		mg/L	1	9/10/2012 9:32:01 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	ND	0.0050		mg/L	5	9/6/2012 4:31:14 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 8:46:07 AM

Lab ID: 1208B35-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Selenium	0.0072	0.0050		mg/L	5	9/6/2012 4:31:14 PM
Uranium	0.10	0.0050	*	mg/L	5	9/6/2012 4:31:14 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.0050	0.0025		mg/L	2.5	9/6/2012 6:43:43 PM
Selenium	0.0072	0.0025		mg/L	2.5	9/6/2012 6:43:43 PM
Uranium	0.11	0.0025	*	mg/L	2.5	9/13/2012 2:15:11 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:03:40 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Acenaphthylene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Aniline	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Anthracene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Azobenzene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Benz(a)anthracene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Benzoic acid	ND	20		µg/L	1	8/31/2012 1:35:23 PM
Benzyl alcohol	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/31/2012 1:35:23 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Carbazole	ND	10		µg/L	1	8/31/2012 1:35:23 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/31/2012 1:35:23 PM
4-Chloroaniline	ND	10		µg/L	1	8/31/2012 1:35:23 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
2-Chlorophenol	ND	10		µg/L	1	8/31/2012 1:35:23 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Chrysene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Dibenzofuran	ND	10		µg/L	1	8/31/2012 1:35:23 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 1:35:23 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

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Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 8:46:07 AM

Lab ID: 1208B35-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Diethyl phthalate	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Dimethyl phthalate	ND	10		µg/L	1	8/31/2012 1:35:23 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/31/2012 1:35:23 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/31/2012 1:35:23 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/31/2012 1:35:23 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/31/2012 1:35:23 PM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Fluoranthene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Fluorene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Hexachlorobenzene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Hexachloroethane	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Isophorone	ND	10		µg/L	1	8/31/2012 1:35:23 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
2-Methylphenol	ND	10		µg/L	1	8/31/2012 1:35:23 PM
3+4-Methylphenol	ND	10		µg/L	1	8/31/2012 1:35:23 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/31/2012 1:35:23 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/31/2012 1:35:23 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Naphthalene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
2-Nitroaniline	ND	10		µg/L	1	8/31/2012 1:35:23 PM
3-Nitroaniline	ND	10		µg/L	1	8/31/2012 1:35:23 PM
4-Nitroaniline	ND	20		µg/L	1	8/31/2012 1:35:23 PM
Nitrobenzene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
2-Nitrophenol	ND	10		µg/L	1	8/31/2012 1:35:23 PM
4-Nitrophenol	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Pentachlorophenol	ND	20		µg/L	1	8/31/2012 1:35:23 PM
Phenanthrene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Phenol	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Pyrene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Pyridine	ND	10		µg/L	1	8/31/2012 1:35:23 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/31/2012 1:35:23 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/31/2012 1:35:23 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/31/2012 1:35:23 PM
Surr: 2,4,6-Tribromophenol	69.9	44.2-126		%REC	1	8/31/2012 1:35:23 PM
Surr: 2-Fluorobiphenyl	88.8	37-114		%REC	1	8/31/2012 1:35:23 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 8:46:07 AM

Lab ID: 1208B35-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorophenol	49.3	23.4-98		%REC	1	8/31/2012 1:35:23 PM
Surr: 4-Terphenyl-d14	77.5	41.3-116		%REC	1	8/31/2012 1:35:23 PM
Surr: Nitrobenzene-d5	90.9	39.5-118		%REC	1	8/31/2012 1:35:23 PM
Surr: Phenol-d5	45.6	20.9-95.9		%REC	1	8/31/2012 1:35:23 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Toluene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Ethylbenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Methyl tert-butyl ether (MTBE)	12	10		µg/L	10	8/31/2012 11:43:46 AM
1,2,4-Trimethylbenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,3,5-Trimethylbenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Naphthalene	ND	20		µg/L	10	8/31/2012 11:43:46 AM
1-Methylnaphthalene	ND	40		µg/L	10	8/31/2012 11:43:46 AM
2-Methylnaphthalene	ND	40		µg/L	10	8/31/2012 11:43:46 AM
Acetone	ND	100		µg/L	10	8/31/2012 11:43:46 AM
Bromobenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Bromodichloromethane	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Bromoform	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Bromomethane	ND	30		µg/L	10	8/31/2012 11:43:46 AM
2-Butanone	ND	100		µg/L	10	8/31/2012 11:43:46 AM
Carbon disulfide	ND	100		µg/L	10	8/31/2012 11:43:46 AM
Carbon Tetrachloride	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Chlorobenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Chloroethane	ND	20		µg/L	10	8/31/2012 11:43:46 AM
Chloroform	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Chloromethane	ND	30		µg/L	10	8/31/2012 11:43:46 AM
2-Chlorotoluene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
4-Chlorotoluene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
cis-1,2-DCE	ND	10		µg/L	10	8/31/2012 11:43:46 AM
cis-1,3-Dichloropropene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	8/31/2012 11:43:46 AM
Dibromochloromethane	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Dibromomethane	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,2-Dichlorobenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,3-Dichlorobenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,4-Dichlorobenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Dichlorodifluoromethane	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,1-Dichloroethane	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,1-Dichloroethene	ND	10		µg/L	10	8/31/2012 11:43:46 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 8:46:07 AM

Lab ID: 1208B35-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,2-Dichloropropane	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,3-Dichloropropane	ND	10		µg/L	10	8/31/2012 11:43:46 AM
2,2-Dichloropropane	ND	20		µg/L	10	8/31/2012 11:43:46 AM
1,1-Dichloropropene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Hexachlorobutadiene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
2-Hexanone	ND	100		µg/L	10	8/31/2012 11:43:46 AM
Isopropylbenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
4-Isopropyltoluene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
4-Methyl-2-pentanone	ND	100		µg/L	10	8/31/2012 11:43:46 AM
Methylene Chloride	ND	30		µg/L	10	8/31/2012 11:43:46 AM
n-Butylbenzene	ND	30		µg/L	10	8/31/2012 11:43:46 AM
n-Propylbenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
sec-Butylbenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Styrene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
tert-Butylbenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	8/31/2012 11:43:46 AM
Tetrachloroethene (PCE)	ND	10		µg/L	10	8/31/2012 11:43:46 AM
trans-1,2-DCE	ND	10		µg/L	10	8/31/2012 11:43:46 AM
trans-1,3-Dichloropropene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,2,3-Trichlorobenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,2,4-Trichlorobenzene	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,1,1-Trichloroethane	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,1,2-Trichloroethane	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Trichloroethene (TCE)	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Trichlorofluoromethane	ND	10		µg/L	10	8/31/2012 11:43:46 AM
1,2,3-Trichloropropane	ND	20		µg/L	10	8/31/2012 11:43:46 AM
Vinyl chloride	ND	10		µg/L	10	8/31/2012 11:43:46 AM
Xylenes, Total	ND	15		µg/L	10	8/31/2012 11:43:46 AM
Surr: 1,2-Dichloroethane-d4	81.6	70-130		%REC	10	8/31/2012 11:43:46 AM
Surr: 4-Bromofluorobenzene	85.7	70-130		%REC	10	8/31/2012 11:43:46 AM
Surr: Dibromofluoromethane	85.9	70-130		%REC	10	8/31/2012 11:43:46 AM
Surr: Toluene-d8	90.2	70-130		%REC	10	8/31/2012 11:43:46 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-4

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:40:00 AM

Lab ID: 1208B35-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/28/2012 5:31:13 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 5:31:13 AM
Surr: DNOP	135	79.5-166		%REC	1	8/28/2012 5:31:13 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/30/2012 1:18:04 PM
Surr: BFB	97.8	69.8-119		%REC	1	8/30/2012 1:18:04 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	1.0	0.10		mg/L	1	8/27/2012 9:15:00 PM
Chloride	58	10		mg/L	20	8/27/2012 9:27:25 PM
Bromide	0.35	0.10		mg/L	1	8/27/2012 9:15:00 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/27/2012 9:15:00 PM
Sulfate	150	10		mg/L	20	8/27/2012 9:27:25 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/5/2012 7:53:43 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.016	0.0020		mg/L	1	9/12/2012 8:24:21 PM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 8:24:21 PM
Calcium	3.0	1.0		mg/L	1	9/12/2012 8:24:21 PM
Chromium	ND	0.0060		mg/L	1	9/12/2012 8:24:21 PM
Copper	ND	0.0060		mg/L	1	9/12/2012 8:24:21 PM
Iron	ND	0.020		mg/L	1	9/12/2012 8:24:21 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 8:24:21 PM
Magnesium	ND	1.0		mg/L	1	9/12/2012 8:24:21 PM
Manganese	ND	0.0020		mg/L	1	9/12/2012 8:24:21 PM
Potassium	ND	1.0		mg/L	1	9/12/2012 8:24:21 PM
Silver	ND	0.0050		mg/L	1	9/12/2012 8:24:21 PM
Sodium	290	5.0		mg/L	5	9/12/2012 8:28:19 PM
Zinc	ND	0.010		mg/L	1	9/12/2012 8:24:21 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: ELS
Barium	0.019	0.0020		mg/L	1	9/10/2012 9:39:54 AM
Cadmium	ND	0.0020		mg/L	1	9/10/2012 9:39:54 AM
Chromium	ND	0.0060		mg/L	1	9/10/2012 9:39:54 AM
Copper	ND	0.0060		mg/L	1	9/10/2012 9:39:54 AM
Iron	0.13	0.020		mg/L	1	9/10/2012 9:39:54 AM
Lead	ND	0.0050		mg/L	1	9/10/2012 9:39:54 AM
Manganese	0.0046	0.0020		mg/L	1	9/10/2012 9:39:54 AM
Silver	ND	0.0050		mg/L	1	9/11/2012 11:05:19 AM
Zinc	ND	0.010		mg/L	1	9/10/2012 9:39:54 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0028	0.0010		mg/L	1	9/6/2012 3:43:57 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-4

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:40:00 AM

Lab ID: 1208B35-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Selenium	ND	0.0010		mg/L	1	9/6/2012 3:43:57 PM
Uranium	0.030	0.0010	*	mg/L	1	9/6/2012 3:43:57 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.0033	0.0025		mg/L	2.5	9/6/2012 6:45:35 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:45:35 PM
Uranium	0.033	0.0025	*	mg/L	2.5	9/13/2012 2:17:03 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:05:26 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Acenaphthylene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Aniline	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Anthracene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Azobenzene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Benz(a)anthracene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Benzoic acid	ND	20		µg/L	1	8/31/2012 2:04:54 PM
Benzyl alcohol	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/31/2012 2:04:54 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Carbazole	ND	10		µg/L	1	8/31/2012 2:04:54 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/31/2012 2:04:54 PM
4-Chloroaniline	ND	10		µg/L	1	8/31/2012 2:04:54 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
2-Chlorophenol	ND	10		µg/L	1	8/31/2012 2:04:54 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Chrysene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Dibenzofuran	ND	10		µg/L	1	8/31/2012 2:04:54 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 2:04:54 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-4

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:40:00 AM

Lab ID: 1208B35-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Diethyl phthalate	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Dimethyl phthalate	ND	10		µg/L	1	8/31/2012 2:04:54 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/31/2012 2:04:54 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/31/2012 2:04:54 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/31/2012 2:04:54 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/31/2012 2:04:54 PM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Fluoranthene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Fluorene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Hexachlorobenzene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Hexachloroethane	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Isophorone	ND	10		µg/L	1	8/31/2012 2:04:54 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
2-Methylphenol	ND	10		µg/L	1	8/31/2012 2:04:54 PM
3+4-Methylphenol	ND	10		µg/L	1	8/31/2012 2:04:54 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/31/2012 2:04:54 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/31/2012 2:04:54 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Naphthalene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
2-Nitroaniline	ND	10		µg/L	1	8/31/2012 2:04:54 PM
3-Nitroaniline	ND	10		µg/L	1	8/31/2012 2:04:54 PM
4-Nitroaniline	ND	20		µg/L	1	8/31/2012 2:04:54 PM
Nitrobenzene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
2-Nitrophenol	ND	10		µg/L	1	8/31/2012 2:04:54 PM
4-Nitrophenol	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Pentachlorophenol	ND	20		µg/L	1	8/31/2012 2:04:54 PM
Phenanthrene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Phenol	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Pyrene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Pyridine	ND	10		µg/L	1	8/31/2012 2:04:54 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/31/2012 2:04:54 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/31/2012 2:04:54 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/31/2012 2:04:54 PM
Surr: 2,4,6-Tribromophenol	96.4	44.2-126		%REC	1	8/31/2012 2:04:54 PM
Surr: 2-Fluorobiphenyl	81.0	37-114		%REC	1	8/31/2012 2:04:54 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-4

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:40:00 AM

Lab ID: 1208B35-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorophenol	61.0	23.4-98		%REC	1	8/31/2012 2:04:54 PM
Surr: 4-Terphenyl-d14	72.5	41.3-116		%REC	1	8/31/2012 2:04:54 PM
Surr: Nitrobenzene-d5	76.8	39.5-118		%REC	1	8/31/2012 2:04:54 PM
Surr: Phenol-d5	47.1	20.9-95.9		%REC	1	8/31/2012 2:04:54 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Toluene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Ethylbenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Naphthalene	ND	2.0		µg/L	1	8/31/2012 4:15:15 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 4:15:15 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 4:15:15 AM
Acetone	ND	10		µg/L	1	8/31/2012 4:15:15 AM
Bromobenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Bromodichloromethane	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Bromoform	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Bromomethane	ND	3.0		µg/L	1	8/31/2012 4:15:15 AM
2-Butanone	ND	10		µg/L	1	8/31/2012 4:15:15 AM
Carbon disulfide	ND	10		µg/L	1	8/31/2012 4:15:15 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Chlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Chloroethane	ND	2.0		µg/L	1	8/31/2012 4:15:15 AM
Chloroform	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Chloromethane	ND	3.0		µg/L	1	8/31/2012 4:15:15 AM
2-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
4-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
cis-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/31/2012 4:15:15 AM
Dibromochloromethane	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Dibromomethane	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: SMW-4

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:40:00 AM

Lab ID: 1208B35-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,2-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/31/2012 4:15:15 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
2-Hexanone	ND	10		µg/L	1	8/31/2012 4:15:15 AM
Isopropylbenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/31/2012 4:15:15 AM
Methylene Chloride	ND	3.0		µg/L	1	8/31/2012 4:15:15 AM
n-Butylbenzene	ND	3.0		µg/L	1	8/31/2012 4:15:15 AM
n-Propylbenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
sec-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Styrene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
tert-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/31/2012 4:15:15 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
trans-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/31/2012 4:15:15 AM
Vinyl chloride	ND	1.0		µg/L	1	8/31/2012 4:15:15 AM
Xylenes, Total	ND	1.5		µg/L	1	8/31/2012 4:15:15 AM
Surr: 1,2-Dichloroethane-d4	85.4	70-130		%REC	1	8/31/2012 4:15:15 AM
Surr: 4-Bromofluorobenzene	88.8	70-130		%REC	1	8/31/2012 4:15:15 AM
Surr: Dibromofluoromethane	85.5	70-130		%REC	1	8/31/2012 4:15:15 AM
Surr: Toluene-d8	85.4	70-130		%REC	1	8/31/2012 4:15:15 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 11:30:00 AM

Lab ID: 1208B35-003

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Toluene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Ethylbenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Naphthalene	ND	2.0		µg/L	1	8/31/2012 4:42:56 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 4:42:56 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 4:42:56 AM
Acetone	ND	10		µg/L	1	8/31/2012 4:42:56 AM
Bromobenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Bromodichloromethane	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Bromoform	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Bromomethane	ND	3.0		µg/L	1	8/31/2012 4:42:56 AM
2-Butanone	ND	10		µg/L	1	8/31/2012 4:42:56 AM
Carbon disulfide	ND	10		µg/L	1	8/31/2012 4:42:56 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Chlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Chloroethane	ND	2.0		µg/L	1	8/31/2012 4:42:56 AM
Chloroform	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Chloromethane	ND	3.0		µg/L	1	8/31/2012 4:42:56 AM
2-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
4-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
cis-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/31/2012 4:42:56 AM
Dibromochloromethane	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Dibromomethane	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/31/2012 4:42:56 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
2-Hexanone	ND	10		µg/L	1	8/31/2012 4:42:56 AM

Qualifiers: * Value exceeds Maximum Contaminant Level.
 E Value above quantitation range
 J Analyte detected below quantitation limits
 P Sample pH greater than 2
 RL Reporting Detection Limit

B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 ND Not Detected at the Reporting Limit
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 11:30:00 AM

Lab ID: 1208B35-003

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Isopropylbenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/31/2012 4:42:56 AM
Methylene Chloride	ND	3.0		µg/L	1	8/31/2012 4:42:56 AM
n-Butylbenzene	ND	3.0		µg/L	1	8/31/2012 4:42:56 AM
n-Propylbenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
sec-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Styrene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
tert-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/31/2012 4:42:56 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
trans-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/31/2012 4:42:56 AM
Vinyl chloride	ND	1.0		µg/L	1	8/31/2012 4:42:56 AM
Xylenes, Total	ND	1.5		µg/L	1	8/31/2012 4:42:56 AM
Surr: 1,2-Dichloroethane-d4	84.6	70-130		%REC	1	8/31/2012 4:42:56 AM
Surr: 4-Bromofluorobenzene	86.4	70-130		%REC	1	8/31/2012 4:42:56 AM
Surr: Dibromofluoromethane	87.3	70-130		%REC	1	8/31/2012 4:42:56 AM
Surr: Toluene-d8	81.7	70-130		%REC	1	8/31/2012 4:42:56 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012

Lab ID: 1208B35-004

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Toluene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Ethylbenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Naphthalene	ND	2.0		µg/L	1	8/31/2012 5:10:49 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 5:10:49 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 5:10:49 AM
Acetone	ND	10		µg/L	1	8/31/2012 5:10:49 AM
Bromobenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Bromodichloromethane	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Bromoform	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Bromomethane	ND	3.0		µg/L	1	8/31/2012 5:10:49 AM
2-Butanone	ND	10		µg/L	1	8/31/2012 5:10:49 AM
Carbon disulfide	ND	10		µg/L	1	8/31/2012 5:10:49 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Chlorobenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Chloroethane	ND	2.0		µg/L	1	8/31/2012 5:10:49 AM
Chloroform	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Chloromethane	ND	3.0		µg/L	1	8/31/2012 5:10:49 AM
2-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
4-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
cis-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/31/2012 5:10:49 AM
Dibromochloromethane	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Dibromomethane	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/31/2012 5:10:49 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
2-Hexanone	ND	10		µg/L	1	8/31/2012 5:10:49 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B35

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012

Lab ID: 1208B35-004

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Isopropylbenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/31/2012 5:10:49 AM
Methylene Chloride	ND	3.0		µg/L	1	8/31/2012 5:10:49 AM
n-Butylbenzene	ND	3.0		µg/L	1	8/31/2012 5:10:49 AM
n-Propylbenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
sec-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Styrene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
tert-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/31/2012 5:10:49 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
trans-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/31/2012 5:10:49 AM
Vinyl chloride	ND	1.0		µg/L	1	8/31/2012 5:10:49 AM
Xylenes, Total	ND	1.5		µg/L	1	8/31/2012 5:10:49 AM
Surr: 1,2-Dichloroethane-d4	86.1	70-130		%REC	1	8/31/2012 5:10:49 AM
Surr: 4-Bromofluorobenzene	86.0	70-130		%REC	1	8/31/2012 5:10:49 AM
Surr: Dibromofluoromethane	86.4	70-130		%REC	1	8/31/2012 5:10:49 AM
Surr: Toluene-d8	86.7	70-130		%REC	1	8/31/2012 5:10:49 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Metals					
Client ID:	PBW	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157472	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: Metals					
Client ID:	LCSW	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157473	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	101	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	155926	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								
Lead	ND	0.0050								
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:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	155927	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	0.51	0.0020	0.5000	0	101	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.50	0.020	0.5000	0.002590	99.7	85	115			
Lead	0.50	0.0050	0.5000	0	100	85	115			
Magnesium	53	1.0	50.00	0	106	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	52	1.0	50.00	0	105	85	115			
Zinc	0.49	0.010	0.5000	0	99.0	85	115			

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156329	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.65	0.0020	0.5000	0.1271	105	70	130			
Cadmium	0.53	0.0020	0.5000	0	105	70	130			
Chromium	0.52	0.0060	0.5000	0.001070	103	70	130			
Copper	0.56	0.0060	0.5000	0	112	70	130			

Notes:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156329	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.56	0.020	0.5000	0.04012	104	70	130			
Lead	0.51	0.0050	0.5000	0	102	70	130			
Magnesium	69	1.0	50.00	13.55	112	70	130			
Manganese	0.53	0.0020	0.5000	0.0006300	106	70	130			
Potassium	56	1.0	50.00	2.284	108	70	130			
Silver	0.10	0.0050	0.1000	0	103	70	130			
Sodium	83	1.0	50.00	27.29	111	70	130			
Zinc	0.52	0.010	0.5000	0.01358	101	70	130			

Sample ID	1208996-003DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156330	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.63	0.0020	0.5000	0.1271	101	70	130	3.05	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	2.73	20	
Chromium	0.50	0.0060	0.5000	0.001070	99.7	70	130	3.48	20	
Copper	0.55	0.0060	0.5000	0	110	70	130	1.68	20	
Iron	0.56	0.020	0.5000	0.04012	103	70	130	0.424	20	
Lead	0.50	0.0050	0.5000	0	99.2	70	130	2.65	20	
Magnesium	68	1.0	50.00	13.55	109	70	130	1.63	20	
Manganese	0.52	0.0020	0.5000	0.0006300	103	70	130	2.93	20	
Potassium	55	1.0	50.00	2.284	106	70	130	1.53	20	
Silver	0.099	0.0050	0.1000	0	99.4	70	130	3.30	20	
Sodium	82	1.0	50.00	27.29	109	70	130	0.982	20	
Zinc	0.50	0.010	0.5000	0.01358	96.5	70	130	4.24	20	

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156332	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	370	5.0	250.0	66.77	122	70	130			

Sample ID	1208996-003DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156333	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	330	5.0	250.0	66.77	106	70	130	11.7	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID MB	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: R5457		RunNo: 5457							
Prep Date:	Analysis Date: 9/12/2012		SeqNo: 156417		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								
Lead	ND	0.0050								
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: R5457		RunNo: 5457							
p Date:	Analysis Date: 9/12/2012		SeqNo: 156418		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.001060	97.0	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.3	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	95.5	85	115			
Copper	0.52	0.0060	0.5000	0	104	85	115			
Iron	0.50	0.020	0.5000	0.003080	99.0	85	115			
Lead	0.47	0.0050	0.5000	0	94.1	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Potassium	49	1.0	50.00	0	98.4	85	115			
Silver	0.10	0.0050	0.1000	0.001260	98.6	85	115			
Sodium	51	1.0	50.00	0	103	85	115			
Zinc	0.46	0.010	0.5000	0	92.6	85	115			

Sample ID 1208A83-002AMS	SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: R5457		RunNo: 5457							
Prep Date:	Analysis Date: 9/12/2012		SeqNo: 156420		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0.007580	89.5	70	130			
Cadmium	0.46	0.0020	0.5000	0.001310	92.5	70	130			
Chromium	0.44	0.0060	0.5000	0	88.1	70	130			
Copper	0.55	0.0060	0.5000	0.04934	99.8	70	130			

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A83-002AMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156420		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.47	0.020	0.5000	0.003920	92.6	70	130			
Magnesium	78	1.0	50.00	28.77	99.1	70	130			
Potassium	50	1.0	50.00	1.179	97.1	70	130			
Silver	0.093	0.0050	0.1000	0	93.0	70	130			
Sodium	60	1.0	50.00	9.466	102	70	130			
Zinc	0.90	0.010	0.5000	0.5237	75.6	70	130			

Sample ID	1208A83-002AMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156421		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0.007580	88.6	70	130	0.945	20	
Cadmium	0.46	0.0020	0.5000	0.001310	91.1	70	130	1.54	20	
Chromium	0.43	0.0060	0.5000	0	86.4	70	130	1.96	20	
Copper	0.55	0.0060	0.5000	0.04934	99.3	70	130	0.477	20	
Iron	0.46	0.020	0.5000	0.003920	91.1	70	130	1.62	20	
Magnesium	78	1.0	50.00	28.77	98.2	70	130	0.598	20	
Potassium	49	1.0	50.00	1.179	96.4	70	130	0.773	20	
Silver	0.093	0.0050	0.1000	0	93.1	70	130	0.150	20	
Sodium	60	1.0	50.00	9.466	101	70	130	0.803	20	
Zinc	0.89	0.010	0.5000	0.5237	72.8	70	130	1.59	20	

Sample ID	1208A83-002AMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156423		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130			
Manganese	4.3	0.010	2.500	1.779	99.4	70	130			

Sample ID	1208A83-002AMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156424		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130	0.395	20	
Manganese	4.3	0.010	2.500	1.779	102	70	130	1.46	20	

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208C13-006AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157513	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	61	1.0	50.00	10.91	99.6	70	130			

Sample ID	1208C13-006AMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157514	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	62	1.0	50.00	10.91	102	70	130	1.97	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157572	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:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157573	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	52	1.0	50.00	0.04813	104	85	115			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157633	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:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157634	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	50	1.0	50.00	0	101	85	115			

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3526	SampType:	MBLK	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	PBW	Batch ID:	3526	RunNo:	5404					
Prep Date:	8/29/2012	Analysis Date:	9/10/2012	SeqNo:	154029	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								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID	LCS-3526	SampType:	LCS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	LCSW	Batch ID:	3526	RunNo:	5404					
Prep Date:	8/29/2012	Analysis Date:	9/10/2012	SeqNo:	154030	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	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.0	85	115			
Copper	0.50	0.0060	0.5000	0	99.4	85	115			
Iron	0.49	0.020	0.5000	0	98.4	85	115			
Lead	0.49	0.0050	0.5000	0	98.7	85	115			
Manganese	0.48	0.0020	0.5000	0	96.1	85	115			
Zinc	0.49	0.010	0.5000	0	98.1	85	115			

Sample ID	1208B33-003EMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	3526	RunNo:	5404					
Prep Date:	8/29/2012	Analysis Date:	9/10/2012	SeqNo:	154057	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	0.57	0.0020	0.5000	0.04450	106	70	130			
Cadmium	0.54	0.0020	0.5000	0	107	70	130			
Chromium	0.51	0.0060	0.5000	0	103	70	130			
Copper	0.57	0.0060	0.5000	0	114	70	130			
Iron	0.66	0.020	0.5000	0.1192	108	70	130			
Lead	0.52	0.0050	0.5000	0	105	70	130			
Manganese	0.68	0.0020	0.5000	0.1610	104	70	130			
Zinc	0.53	0.010	0.5000	0.001530	106	70	130			

Sample ID	1208B33-003EMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	3526	RunNo:	5404					
Prep Date:	8/29/2012	Analysis Date:	9/10/2012	SeqNo:	154058	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 |
| P Sample pH greater than 2 | R RPD outside accepted recovery limits |

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B33-003EMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	BatchQC		Batch ID:	3526		RunNo:	5404			
Prep Date:	8/29/2012		Analysis Date:	9/10/2012		SeqNo:	154058		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.56	0.0020	0.5000	0.04450	104	70	130	1.69	20	
Cadmium	0.53	0.0020	0.5000	0	106	70	130	1.27	20	
Chromium	0.51	0.0060	0.5000	0	101	70	130	1.19	20	
Copper	0.56	0.0060	0.5000	0	112	70	130	1.83	20	
Iron	0.65	0.020	0.5000	0.1192	105	70	130	2.21	20	
Lead	0.52	0.0050	0.5000	0	103	70	130	1.18	20	
Manganese	0.67	0.0020	0.5000	0.1610	101	70	130	2.31	20	
Zinc	0.53	0.010	0.5000	0.001530	105	70	130	1.02	20	

Sample ID	MB-3526		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	3526		RunNo:	5435			
Prep Date:	8/29/2012		Analysis Date:	9/11/2012		SeqNo:	155084		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID	LCS-3526		SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW		Batch ID:	3526		RunNo:	5435			
Prep Date:	8/29/2012		Analysis Date:	9/11/2012		SeqNo:	155085		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	96.8	85	115			

Sample ID	1208B33-003EMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	BatchQC		Batch ID:	3526		RunNo:	5435			
Prep Date:	8/29/2012		Analysis Date:	9/11/2012		SeqNo:	155112		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.065	0.0050	0.1000	0	64.6	70	130			S

Sample ID	1208B33-003EMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	BatchQC		Batch ID:	3526		RunNo:	5435			
Prep Date:	8/29/2012		Analysis Date:	9/11/2012		SeqNo:	155113		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.069	0.0050	0.1000	0	69.3	70	130	6.99	20	S

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3526	SampType:	MBLK	TestCode:	EPA 200.8: Metals					
Client ID:	PBW	Batch ID:	3526	RunNo:	5235					
Prep Date:	8/29/2012	Analysis Date:	8/30/2012	SeqNo:	148847	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								
Uranium	ND	0.0025								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208476-008EMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152349		Units:		mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.029	0.0010	0.02500	0	117	70	130				

Sample ID	1208654-002AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152351		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.16	0.0050	0.1250	0.03618	99.4	70	130				

Sample ID	1208944-008AMS	SampType:	MS	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5350	RunNo:	5350					
Prep Date:		Analysis Date:	9/6/2012	SeqNo:	152364	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0.0002792	97.9	70	130			
Selenium	0.029	0.0010	0.02500	0.004276	97.4	70	130			
Uranium	0.034	0.0010	0.02500	0.008442	103	70	130			

Sample ID	1208A83-002AMS		SampType: MS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	BatchQC		Batch ID: R5350		RunNo: 5350					
Prep Date:			Analysis Date: 9/6/2012		SeqNo: 152381		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.7	70	130			
Selenium	0.026	0.0010	0.02500	0.001591	98.2	70	130			
Uranium	0.027	0.0010	0.02500	0.0009453	103	70	130			

Sample ID	1208B35-001DMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	SMW-2		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152398		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.12	0.0050	0.1250	0.003821	93.6	70	130				
Selenium	0.11	0.0050	0.1250	0.007249	83.7	70	130				
Uranium	0.23	0.0050	0.1250	0.1005	107	70	130				

Sample ID	LCS	SampType:	LCS	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R5350	RunNo:	5350					
Prep Date:		Analysis Date:	9/6/2012	SeqNo:	152416	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	LCSW		Batch ID:	R5350		RunNo:	5350			
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152416	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID	LCS		SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	LCSW		Batch ID:	R5350		RunNo:	5350			
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152417	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	102	85	115			
Selenium	0.026	0.0010	0.02500	0	103	85	115			
Uranium	0.024	0.0010	0.02500	0	97.0	85	115			

Sample ID	MB		SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	PBW		Batch ID:	R5350		RunNo:	5350			
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152420	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	MB		SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals			
Client ID:	PBW		Batch ID:	R5350		RunNo:	5350			
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152421	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3526	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3526	RunNo:	5235					
Prep Date:	8/29/2012	Analysis Date:	8/30/2012	SeqNo:	148880	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								
Uranium	ND	0.0025								

fiers:

Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3705	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156146	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-3705	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156147	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.9	80	120			

Sample ID	1208A83-001BMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156149	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	98.2	75	125			

Sample ID	1208A83-001BMSD	SampType:	MSD	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156150	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	97.7	75	125	0.517	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B39-001BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5125	RunNo:	5125					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	145633	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.2	0.10	0.5000	0.7261	87.5	76.6	110			
Chloride	9.9	0.50	5.000	4.684	105	87.8	111			
Bromide	2.5	0.10	2.500	0.09394	94.3	83.3	107			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	97.0	74.5	115			
Sulfate	29	0.50	10.00	18.80	104	84.6	122			

Sample ID 1208B39-001BMSD		SampType: MSD		TestCode: EPA Method 300.0: Anions						
Client ID: BatchQC		Batch ID: R5125		RunNo: 5125						
Prep Date:		Analysis Date: 8/27/2012		SeqNo: 145634		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.2	0.10	0.5000	0.7261	87.9	76.6	110	0.136	20	
Chloride	9.8	0.50	5.000	4.684	103	87.8	111	1.03	20	
Bromide	2.4	0.10	2.500	0.09394	92.3	83.3	107	2.02	20	
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.4	74.5	115	1.64	20	
Sulfate	29	0.50	10.00	18.80	100	84.6	122	1.21	20	

Sample ID: 1208B66-001BMS	SampType: MS		TestCode: EPA Method 300.0: Anions							
Client ID: BatchQC	Batch ID: R5125		RunNo: 5125							
Prep Date:	Analysis Date: 8/27/2012		SeqNo: 145645		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.4	0.10	0.5000	1.973	90.8	76.6	110			
Chloride	18	0.50	5.000	11.71	117	87.8	111			S
Bromide	2.2	0.10	2.500	0	89.4	83.3	107			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	101	74.5	115			

Sample ID	1208B66-001BMSD			SampType:	MSD		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5125		RunNo:	5125				
Prep Date:			Analysis Date:	8/27/2012		SeqNo:	145646		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	2.4	0.10	0.5000	1.973	95.3	76.6	110	0.921	20		
Chloride	18	0.50	5.000	11.71	119	87.8	111	0.300	20	S	
Bromide	2.2	0.10	2.500	0	89.1	83.3	107	0.390	20		
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.9	74.5	115	0.717	20		

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5125	RunNo:	5125					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	145648	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Notes:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R5125	RunNo: 5125								
Prep Date:	Analysis Date: 8/27/2012	SeqNo: 145648 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID LCS-b	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R5125	RunNo: 5125								
Prep Date:	Analysis Date: 8/27/2012	SeqNo: 145649 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	97.3	90	110			
Chloride	4.8	0.50	5.000	0	96.0	90	110			
Bromide	2.4	0.10	2.500	0	94.3	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	100	90	110			
Sulfate	9.5	0.50	10.00	0	95.2	90	110			

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R5323	RunNo: 5323								
Prep Date:	Analysis Date: 9/5/2012	SeqNo: 151555 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								
Nitrate+Nitrite as N	ND	0.20								

Sample ID LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R5323	RunNo: 5323								
Prep Date:	Analysis Date: 9/5/2012	SeqNo: 151556 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	96.7	90	110			
Sulfate	9.8	0.50	10.00	0	98.0	90	110			
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.5	90	110			

Sample ID 1209065-001AMS	SampType: MS	TestCode: EPA Method 300.0: Anions								
Client ID: BatchQC	Batch ID: R5323	RunNo: 5323								
Prep Date:	Analysis Date: 9/5/2012	SeqNo: 151558 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	41	0.50	10.00	30.34	104	84.6	122			
Nitrate+Nitrite as N	5.8	0.20	3.500	2.072	107	88.6	110			

Qualifiers:

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

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1209065-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151559	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	41	0.50	10.00	30.34	105	84.6	122	0.241	20	
Nitrate+Nitrite as N	5.8	0.20	3.500	2.072	107	88.6	110	0.218	20	

Sample ID	1209077-005AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151574	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	0.50	5.000	9.031	108	87.8	111			
Nitrate+Nitrite as N	6.4	0.20	3.500	2.865	102	88.6	110			

Sample ID	1209077-005AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151575	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	0.50	5.000	9.031	107	87.8	111	0.305	20	
e+Nitrite as N	6.5	0.20	3.500	2.865	103	88.6	110	0.477	20	

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3489		SampType:	MBLK		TestCode:	EPA Method 8015B: Diesel Range			
Client ID:	PBW		Batch ID:	3489		RunNo:	5106			
Prep Date:	8/27/2012		Analysis Date:	8/27/2012		SeqNo:	145462	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		118	79.5	166			

Sample ID	LCS-3489		SampType:	LCS		TestCode:	EPA Method 8015B: Diesel Range			
Client ID:	LCSW		Batch ID:	3489		RunNo:	5106			
Prep Date:	8/27/2012		Analysis Date:	8/27/2012		SeqNo:	145463	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.0	1.0	5.000	0	80.2	74	157			
Surr: DNOP	0.51		0.5000		101	79.5	166			

Sample ID	LCSD-3489		SampType:	LCSD		TestCode:	EPA Method 8015B: Diesel Range			
Client ID:	LCSS02		Batch ID:	3489		RunNo:	5106			
Prep Date:	8/27/2012		Analysis Date:	8/27/2012		SeqNo:	145464	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.2	1.0	5.000	0	84.5	74	157	5.19	23	
Surr: DNOP	0.52		0.5000		104	79.5	166	0	0	

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBW	Batch ID:	R5174	RunNo:	5174					
Prep Date:		Analysis Date:	8/29/2012	SeqNo:	147866	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		96.1	69.8	119			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSW	Batch ID:	R5174	RunNo:	5174					
Prep Date:		Analysis Date:	8/29/2012	SeqNo:	147868	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.41	0.050	0.5000	0	82.3	75.9	119			
Surr: BFB	21		20.00		103	69.8	119			

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R5174	RunNo:	5174					
Prep Date:		Analysis Date:	8/29/2012	SeqNo:	147892	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R5174	RunNo:	5174					
Prep Date:		Analysis Date:	8/29/2012	SeqNo:	147893	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	1208C71-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5174	RunNo:	5174					
Prep Date:		Analysis Date:	8/29/2012	SeqNo:	147898	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.83		0.8248		101	80	120			

Sample ID	1208C71-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5174	RunNo:	5174					
Prep Date:		Analysis Date:	8/29/2012	SeqNo:	147909	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.86		0.8248		104	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B35

all Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml-rb	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	R5213	RunNo:	5213					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	148266	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								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.6	70	130			
Surr: 4-Bromofluorobenzene	8.4		10.00		84.3	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.5	70	130			
Surr: Toluene-d8	8.5		10.00		84.7	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	LCSW	Batch ID:	R5213	RunNo:	5213					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	148267	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.6	70	130			
Toluene	19	1.0	20.00	0	96.9	80	120			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.6	70	130			
Surr: 4-Bromofluorobenzene	8.6		10.00		85.8	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	8.2		10.00		82.5	70	130			

Sample ID	b3	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150165	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								

Flags:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	b3	SampType:	MBLK	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	PBW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150165	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.5	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		82.2	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.5	70	130			
Surr: Toluene-d8	7.3		10.00		73.3	70	130			

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260: Volatiles Short List					
Client ID:	LCSW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150166	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	19	1.0	20.00	0	96.2	80	120			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.9	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.4	70	130			
Surr: Toluene-d8	8.0		10.00		79.7	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: 5ml-rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5213		RunNo: 5213							
Prep Date:	Analysis Date: 8/30/2012		SeqNo: 148675		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								
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								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Notes:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5213	RunNo:	5213					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	148675	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.6	70	130			
Surr: 4-Bromofluorobenzene	8.4		10.00		84.3	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.5	70	130			
Surr: Toluene-d8	8.5		10.00		84.7	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5213	RunNo:	5213					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	148676	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.6	70	130			
Toluene	19	1.0	20.00	0	96.9	80	120			
Chlorobenzene	19	1.0	20.00	0	94.8	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.0	73.7	122			
Trichloroethene (TCE)	19	1.0	20.00	0	93.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.6	70	130			
Surr: 4-Bromofluorobenzene	8.6		10.00		85.8	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5213	RunNo:	5213					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	148676	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130			
Surr: Toluene-d8	8.2		10.00		82.5	70	130			

Sample ID	1208a02-003a ms			SampType:	MS		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	BatchQC			Batch ID:	R5213		RunNo:	5213			
Prep Date:				Analysis Date:	8/30/2012		SeqNo:	148677		Units:	µg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	20	1.0	20.00	0	99.0	66.8	128				
Toluene	21	1.0	20.00	0	104	70	130				
Chlorobenzene	19	1.0	20.00	0	96.6	70	130				
1,1-Dichloroethene	19	1.0	20.00	0	96.6	70	130				
Trichloroethene (TCE)	18	1.0	20.00	0	90.0	70	130				
Surr: 1,2-Dichloroethane-d4	8.5		10.00		85.4	70	130				
Surr: 4-Bromofluorobenzene	8.2		10.00		82.1	70	130				
Surr: Dibromofluoromethane	8.1		10.00		81.3	70	130				
Surr: Toluene-d8	8.4		10.00		84.3	70	130				

Sample ID	1208a02-003a msd			SampType:	MSD		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	BatchQC		Batch ID:	R5213		RunNo:	5213				
Prep Date:			Analysis Date:	8/30/2012		SeqNo:	148678		Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	20	1.0	20.00	0	98.1	66.8	128	0.921	16.7		
Toluene	19	1.0	20.00	0	93.9	70	130	10.4	18.7		
Chlorobenzene	18	1.0	20.00	0	91.4	70	130	5.54	19.5		
1,1-Dichloroethene	18	1.0	20.00	0	91.3	70	130	5.61	16.7		
Trichloroethene (TCE)	18	1.0	20.00	0	87.8	70	130	2.46	17.5		
Surr: 1,2-Dichloroethane-d4	8.9		10.00		89.0	70	130	0	0		
Surr: 4-Bromofluorobenzene	8.6		10.00		86.4	70	130	0	0		
Surr: Dibromofluoromethane	9.1		10.00		91.5	70	130	0	0		
Surr: Toluene-d8	8.4		10.00		84.1	70	130	0	0		

Sample ID	5ml-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150096	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								

Notes:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml-rb		SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW		Batch ID:	R5276		RunNo:	5276				
Prep Date:			Analysis Date:	8/31/2012		SeqNo:	150096		Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

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
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

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150096	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
Bromofluoromethane	ND	1.0								
1,1,2-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.5	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		87.2	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.5	70	130			
Surr: Toluene-d8	8.1		10.00		80.9	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150102	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.0	70	130			
Toluene	20	1.0	20.00	0	98.3	80	120			
Chlorobenzene	19	1.0	20.00	0	95.3	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	92.3	73.7	122			
Trichloroethene (TCE)	18	1.0	20.00	0	92.0	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.3	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		83.2	70	130			
Surr: Dibromofluoromethane	8.3		10.00		83.1	70	130			
Surr: Toluene-d8	8.6		10.00		86.0	70	130			

Notes:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208b33-001a ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150105	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.2	66.8	128			
Toluene	19	1.0	20.00	0	93.4	70	130			
Chlorobenzene	18	1.0	20.00	0	87.7	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.8	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.7	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		81.9	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.3	70	130			
Surr: Toluene-d8	8.1		10.00		80.9	70	130			

Sample ID	1208b33-001a msd	SampType:	MSD	TestCode: EPA Method 8260B: VOLATILES						
Client ID:	BatchQC	Batch ID:	R5276	RunNo: 5276						
Prep Date:		Analysis Date:	8/31/2012	SeqNo: 150106		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.0	66.8	128	3.31	16.7	
Toluene	18	1.0	20.00	0	92.1	70	130	1.37	18.7	
Chlorobenzene	18	1.0	20.00	0	88.2	70	130	0.567	19.5	
1,1-Dichloroethene	18	1.0	20.00	0	88.3	70	130	3.50	16.7	
Trichloroethene (TCE)	16	1.0	20.00	0	80.0	70	130	9.39	17.5	
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.4		10.00		83.7	70	130	0	0	
Surr: Dibromofluoromethane	8.2		10.00		82.3	70	130	0	0	
Surr: Toluene-d8	8.4		10.00		83.6	70	130	0	0	

Sample ID	b3	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R5276			RunNo: 5276					
Prep Date:		Analysis Date: 8/31/2012			SeqNo: 150141		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								

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID b3	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150141		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
monochloromethane	ND	1.0								
monomomethane	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								

Flags:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID b3	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150141		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.5	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		82.2	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.5	70	130			
Surr: Toluene-d8	7.3		10.00		73.3	70	130			

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150143		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	19	1.0	20.00	0	96.2	80	120			
Chlorobenzene	18	1.0	20.00	0	90.4	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	87.5	73.7	122			
Trichloroethene (TCE)	17	1.0	20.00	0	83.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.9	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.4	70	130			
Surr: Toluene-d8	8.0		10.00		79.7	70	130			

Sample ID 1208b42-003a ms	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: BatchQC	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 9/1/2012		SeqNo: 150144		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.1	66.8	128			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	92.5	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	89.4	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID 1208b42-003a ms		SampType: MS		TestCode: EPA Method 8260B: VOLATILES						
Client ID: BatchQC		Batch ID: R5276		RunNo: 5276						
Prep Date:		Analysis Date: 9/1/2012		SeqNo: 150144		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.8	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.7	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.6	70	130			
Surr: Toluene-d8	8.7		10.00		87.0	70	130			

Sample ID	1208b42-003a msd	SampType:	MSD	TestCode: EPA Method 8260B: VOLATILES						
Client ID:	BatchQC	Batch ID:	R5276	RunNo: 5276						
Prep Date:		Analysis Date:	9/1/2012	SeqNo: 150145		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.7	66.8	128	5.60	16.7	
Toluene	19	1.0	20.00	0	93.1	70	130	11.3	18.7	
Chlorobenzene	19	1.0	20.00	0	92.5	70	130	9.49	19.5	
1,1-Dichloroethene	18	1.0	20.00	0	88.4	70	130	4.61	16.7	
Trichloroethene (TCE)	17	1.0	20.00	0	84.3	70	130	5.77	17.5	
Surr: 1,2-Dichloroethane-d4	8.3		10.00		82.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.6		10.00		85.7	70	130	0	0	
Surr: Dibromofluoromethane	8.4		10.00		83.9	70	130	0	0	
Surr: Toluene-d8	8.6		10.00		85.5	70	130	0	0	

Sample ID	b7	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R5276		RunNo: 5276						
Prep Date:		Analysis Date: 9/1/2012		SeqNo: 150170		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								

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: b7	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R5276	RunNo: 5276								
Prep Date:	Analysis Date: 9/1/2012	SeqNo: 150170	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
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								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B35

Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID b7	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 9/1/2012		SeqNo: 150170		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.8	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.7	70	130			
Surr: Toluene-d8	8.2		10.00		82.4	70	130			

Sample ID 100ng lcs3	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 9/1/2012		SeqNo: 150173		Units: µg/L					
lyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.7	70	130			
Toluene	19	1.0	20.00	0	94.8	80	120			
Chlorobenzene	18	1.0	20.00	0	92.3	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	87.5	73.7	122			
Trichloroethene (TCE)	17	1.0	20.00	0	86.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.1	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		82.6	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.7	70	130			
Surr: Toluene-d8	8.2		10.00		81.7	70	130			

Sample ID 1208c45-009a ms	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: BatchQC	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 9/1/2012		SeqNo: 150176		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.6	66.8	128			
Toluene	19	1.0	20.00	0	95.4	70	130			
Chlorobenzene	18	1.0	20.00	0	89.0	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.1	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0.3838	86.1	70	130			
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.7	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.7	70	130			
Surr: Dibromofluoromethane	8.8		10.00		87.8	70	130			
Surr: Toluene-d8	8.3		10.00		82.6	70	130			

Flags:

- | | | |
|--|----|--|
| Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| Sample pH greater than 2 | R | RPD outside accepted recovery limits |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: 1208c45-009a msd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES								
Client ID: BatchQC	Batch ID: R5276	RunNo: 5276								
Prep Date:	Analysis Date: 9/1/2012	SeqNo: 150177			Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.2	66.8	128	5.78	16.7	
Toluene	19	1.0	20.00	0	93.6	70	130	1.86	18.7	
Chlorobenzene	18	1.0	20.00	0	89.4	70	130	0.446	19.5	
1,1-Dichloroethene	17	1.0	20.00	0	85.0	70	130	6.99	16.7	
Trichloroethene (TCE)	16	1.0	20.00	0.3838	80.3	70	130	6.85	17.5	
Surr: 1,2-Dichloroethane-d4	8.0		10.00		79.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.8		10.00		88.2	70	130	0	0	
Surr: Dibromofluoromethane	7.8		10.00		77.5	70	130	0	0	
Surr: Toluene-d8	8.3		10.00		82.9	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3504	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3504	RunNo:	5185					
Prep Date:	8/28/2012	Analysis Date:	8/29/2012	SeqNo:	147346	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								
mophenyl 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								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								

ifiers:

Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B35

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: mb-3504	SampType: MBLK	TestCode: EPA Method 8270C: Semivolatiles								
Client ID: PBW	Batch ID: 3504	RunNo: 5185								
Prep Date: 8/28/2012	Analysis Date: 8/29/2012	SeqNo: 147346 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	20								
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: 2,4,6-Tribromophenol	180		200.0		88.0	44.2	126			
Surr: 2-Fluorobiphenyl	60		100.0		60.3	37	114			
Surr: 2-Fluorophenol	94		200.0		47.0	23.4	98			
Surr: 4-Terphenyl-d14	72		100.0		72.5	41.3	116			
Surr: Nitrobenzene-d5	59		100.0		58.9	39.5	118			
Surr: Phenol-d5	75		200.0		37.5	20.9	95.9			

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 |
| P Sample pH greater than 2 | R RPD outside accepted recovery limits |

QC SUMMARY REPORT

WO#: 1208B35

all Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	lcs-3504		SampType: LCS	TestCode: EPA Method 8270C: Semivolatiles						
Client ID:	LCSW		Batch ID: 3504	RunNo: 5185						
Prep Date:	8/28/2012		Analysis Date: 8/29/2012	SeqNo: 147347		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	76	10	100.0	0	75.7	38.2	99.4			
4-Chloro-3-methylphenol	160	10	200.0	0	80.7	35.5	108			
2-Chlorophenol	160	10	200.0	0	78.0	29.8	106			
1,4-Dichlorobenzene	65	10	100.0	0	65.0	32.6	91.5			
2,4-Dinitrotoluene	92	10	100.0	0	92.2	44.7	112			
N-Nitrosodi-n-propylamine	78	10	100.0	0	78.2	38.5	105			
4-Nitrophenol	120	10	200.0	0	58.1	11.6	73.1			
Pentachlorophenol	180	20	200.0	0	88.2	20.2	93			
Phenol	99	10	200.0	0	49.4	23	66.1			
Pyrene	77	10	100.0	0	77.4	40.1	101			
1,2,4-Trichlorobenzene	71	10	100.0	0	71.2	37.7	99.1			
Surr: 2,4,6-Tribromophenol	210		200.0		105	44.2	126			
Surr: 2-Fluorobiphenyl	76		100.0		75.7	37	114			
Surr: 2-Fluorophenol	110		200.0		54.0	23.4	98			
Surr: 4-Terphenyl-d14	82		100.0		82.5	41.3	116			
Surr: Nitrobenzene-d5	80		100.0		80.2	39.5	118			
τ: Phenol-d5	96		200.0		48.2	20.9	95.9			

Sample ID	lcsd-3504		SampType: LCSD	TestCode: EPA Method 8270C: Semivolatiles						
Client ID:	LCSS02		Batch ID: 3504	RunNo: 5185						
Prep Date:	8/28/2012		Analysis Date: 8/29/2012	SeqNo: 147348		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	62.5	38.2	99.4	19.0	20	
4-Chloro-3-methylphenol	120	10	200.0	0	60.9	35.5	108	27.9	20	R
2-Chlorophenol	120	10	200.0	0	57.9	29.8	106	29.6	20	R
1,4-Dichlorobenzene	44	10	100.0	0	44.0	32.6	91.5	38.6	20	R
2,4-Dinitrotoluene	78	10	100.0	0	78.0	44.7	112	16.6	20	
N-Nitrosodi-n-propylamine	63	10	100.0	0	63.2	38.5	105	21.3	20	R
4-Nitrophenol	94	10	200.0	0	46.9	11.6	73.1	21.3	20	R
Pentachlorophenol	130	20	200.0	0	64.8	20.2	93	30.6	20	R
Phenol	71	10	200.0	0	35.7	23	66.1	32.2	20	R
Pyrene	65	10	100.0	0	65.2	40.1	101	17.0	20	
1,2,4-Trichlorobenzene	56	10	100.0	0	56.0	37.7	99.1	23.8	20	R
Surr: 2,4,6-Tribromophenol	150		200.0		74.9	44.2	126	0	0	
Surr: 2-Fluorobiphenyl	65		100.0		64.7	37	114	0	0	
Surr: 2-Fluorophenol	91		200.0		45.4	23.4	98	0	0	
Surr: 4-Terphenyl-d14	68		100.0		67.8	41.3	116	0	0	
Surr: Nitrobenzene-d5	62		100.0		62.5	39.5	118	0	0	
Surr: Phenol-d5	76		200.0		38.0	20.9	95.9	0	0	

ifiers:

Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

Sample Log-In Check List

Client Name: Western Refining Gallup

Work Order Number: 1208B35

Received by/date: com 08/24/12

Logged By: Anne Thorne

8/24/2012 3:40:00 PM

Completed By: **Anne Thorne**

8/27/2012

Reviewed By:

Chain of Custody

1. Were seals intact?
2. Is Chain of Custody complete?
3. How was the sample delivered?

Yes ☒ No ☐ Not Present ☐

Yes ☒ No ☐ Not Present ☐

Client

Log In

4. Coolers are present? (see 19. for cooler specific information)
5. Was an attempt made to cool the samples?
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ?
7. Sample(s) in proper container(s)?
8. Sufficient sample volume for indicated test(s)?
9. Are samples (except VOA and ONG) properly preserved?
10. Was preservative added to bottles?

Yes ☒ No ☐ NA ☐

Yes ☒ No ☐ NA ☐

Yes ☒ No ☐ NA ☐

Yes ☒ No ☐

Yes ☒ No ☐

Yes ☒ No ☐

Yes ☐ No ☒ NA ☐

11. VOA vials have zero headspace?
12. Were any sample containers received broken?
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody?
15. Is it clear what analyses were requested?
16. Were all holding times able to be met?
(If no, notify customer for authorization.)

Yes ☒ No ☐ No VOA Vials ☐

Yes ☐ No ☒

Yes ☒ No ☐

Yes ☒ No ☐

Yes ☒ No ☐

Yes ☒ No ☐

of preserved bottles checked for pH: 6

Adjusted?

Checked by:

Special Handling (if applicable)

17. 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: _____

18. Additional remarks:

19. Cooler Information

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

UNAI IT-CUSTODY RECORD

Client: Western Refining

Mailing Address:

Rt 3 Box 7

Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

☐ Standard

☐ Rush

Project Name:

3rd QTR 2012 Groundwater

Sampling

Project #:

Annual Sampling

Project Manager:

Cheryl Johnson

Sampler:

On Ice:

☒ Yes

☐ No

Sample Temperature:

1.0

Sample Request ID

Container Type and #

Preservative Type

HEAL No.

1208B35

8015B (DRO/GRO)

WQCC Metals (Total and Dissolved)

Analysis Request

Air Pollution (V or M)

Remarks:

Received by:

Relinquished by:

Date:

Time:

8/24/12

1540

Received by:

Relinquished by:

Date:

Time:

8/24/12

1540

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



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

September 25, 2012

Cheryl Johnson

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-0231

FAX (505) 722-0210

RE: 3rd QTR 2012 Groundwater Sampling

OrderNo.: 1208B41

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/24/2012 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. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. 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.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

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

Lab Order 1208B41

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup**Client Sample ID:** PW-3**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/24/2012 6:50:00 AM**Lab ID:** 1208B41-001**Matrix:** AQUEOUS**Received Date:** 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.35	0.10		mg/L	1	8/27/2012 6:21:15 PM
Chloride	29	10		mg/L	20	8/27/2012 6:33:40 PM
Bromide	0.11	0.10		mg/L	1	8/27/2012 6:21:15 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/27/2012 6:21:15 PM
Sulfate	740	10		mg/L	20	8/27/2012 6:33:40 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/5/2012 11:12:15 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.011	0.0020		mg/L	1	9/12/2012 9:54:24 PM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 9:54:24 PM
Calcium	240	5.0		mg/L	5	9/12/2012 9:58:13 PM
Chromium	ND	0.0060		mg/L	1	9/12/2012 9:54:24 PM
Copper	ND	0.0060		mg/L	1	9/12/2012 9:54:24 PM
Iron	0.042	0.020		mg/L	1	9/12/2012 9:54:24 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 9:54:24 PM
Magnesium	50	1.0		mg/L	1	9/12/2012 9:54:24 PM
Manganese	ND	0.0020		mg/L	1	9/12/2012 9:54:24 PM
Potassium	1.3	1.0		mg/L	1	9/12/2012 9:54:24 PM
Silver	ND	0.0050		mg/L	1	9/12/2012 9:54:24 PM
Sodium	59	1.0		mg/L	1	9/12/2012 9:54:24 PM
Zinc	0.030	0.010		mg/L	1	9/12/2012 9:54:24 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.011	0.0020		mg/L	1	9/11/2012 12:21:12 PM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 12:21:12 PM
Chromium	ND	0.0060		mg/L	1	9/11/2012 12:21:12 PM
Copper	ND	0.0060		mg/L	1	9/11/2012 12:21:12 PM
Iron	0.24	0.020		mg/L	1	9/11/2012 12:21:12 PM
Lead	ND	0.0050		mg/L	1	9/11/2012 12:21:12 PM
Manganese	ND	0.0020		mg/L	1	9/11/2012 12:21:12 PM
Silver	ND	0.0050		mg/L	1	9/11/2012 12:21:12 PM
Zinc	0.027	0.010		mg/L	1	9/11/2012 12:21:12 PM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0034	0.0010		mg/L	1	9/11/2012 12:52:12 PM
Selenium	0.0012	0.0010		mg/L	1	9/11/2012 12:52:12 PM
Uranium	0.0015	0.0010		mg/L	1	9/11/2012 12:52:12 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.0040	0.0025		mg/L	2.5	9/6/2012 6:47:27 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:47:27 PM
Uranium	ND	0.0025		mg/L	2.5	9/13/2012 2:18:55 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B41

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-3

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 6:50:00 AM

Lab ID: 1208B41-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 245.1: MERCURY						
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:21:33 AM
EPA METHOD 8270C: SEMIVOLATILES						
Acenaphthene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Acenaphthylene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Aniline	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Anthracene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Azobenzene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Benz(a)anthracene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Benzoic acid	ND	20		µg/L	1	8/28/2012 6:22:07 PM
Benzyl alcohol	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/28/2012 6:22:07 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Carbazole	ND	10		µg/L	1	8/28/2012 6:22:07 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/28/2012 6:22:07 PM
4-Chloroaniline	ND	10		µg/L	1	8/28/2012 6:22:07 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
2-Chlorophenol	ND	10		µg/L	1	8/28/2012 6:22:07 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Chrysene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Dibenzofuran	ND	10		µg/L	1	8/28/2012 6:22:07 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
1,4-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Diethyl phthalate	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Dimethyl phthalate	ND	10		µg/L	1	8/28/2012 6:22:07 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/28/2012 6:22:07 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/28/2012 6:22:07 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/28/2012 6:22:07 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/28/2012 6:22:07 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B41

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-3

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 6:50:00 AM

Lab ID: 1208B41-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
2,4-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Fluoranthene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Fluorene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Hexachlorobenzene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Hexachloroethane	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Isophorone	ND	10		µg/L	1	8/28/2012 6:22:07 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
2-Methylphenol	ND	10		µg/L	1	8/28/2012 6:22:07 PM
3+4-Methylphenol	ND	10		µg/L	1	8/28/2012 6:22:07 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/28/2012 6:22:07 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/28/2012 6:22:07 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Naphthalene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
2-Nitroaniline	ND	10		µg/L	1	8/28/2012 6:22:07 PM
3-Nitroaniline	ND	10		µg/L	1	8/28/2012 6:22:07 PM
4-Nitroaniline	ND	20		µg/L	1	8/28/2012 6:22:07 PM
Nitrobenzene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
2-Nitrophenol	ND	10		µg/L	1	8/28/2012 6:22:07 PM
4-Nitrophenol	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Pentachlorophenol	ND	20		µg/L	1	8/28/2012 6:22:07 PM
Phenanthrene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Phenol	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Pyrene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Pyridine	ND	10		µg/L	1	8/28/2012 6:22:07 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/28/2012 6:22:07 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/28/2012 6:22:07 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/28/2012 6:22:07 PM
Surr: 2,4,6-Tribromophenol	82.2	44.2-126		%REC	1	8/28/2012 6:22:07 PM
Surr: 2-Fluorobiphenyl	68.5	37-114		%REC	1	8/28/2012 6:22:07 PM
Surr: 2-Fluorophenol	43.7	23.4-98		%REC	1	8/28/2012 6:22:07 PM
Surr: 4-Terphenyl-d14	64.7	41.3-116		%REC	1	8/28/2012 6:22:07 PM
Surr: Nitrobenzene-d5	72.3	39.5-118		%REC	1	8/28/2012 6:22:07 PM
Surr: Phenol-d5	40.6	20.9-95.9		%REC	1	8/28/2012 6:22:07 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Toluene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
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- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B41

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-3

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 6:50:00 AM

Lab ID: 1208B41-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Ethylbenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Naphthalene	ND	2.0		µg/L	1	9/1/2012 2:29:34 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 2:29:34 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 2:29:34 AM
Acetone	ND	10		µg/L	1	9/1/2012 2:29:34 AM
Bromobenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Bromoform	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Bromomethane	ND	3.0		µg/L	1	9/1/2012 2:29:34 AM
2-Butanone	ND	10		µg/L	1	9/1/2012 2:29:34 AM
Carbon disulfide	ND	10		µg/L	1	9/1/2012 2:29:34 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Chlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Chloroethane	ND	2.0		µg/L	1	9/1/2012 2:29:34 AM
Chloroform	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Chloromethane	ND	3.0		µg/L	1	9/1/2012 2:29:34 AM
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2012 2:29:34 AM
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Dibromomethane	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2012 2:29:34 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
2-Hexanone	ND	10		µg/L	1	9/1/2012 2:29:34 AM
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B41

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: PW-3

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 6:50:00 AM

Lab ID: 1208B41-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2012 2:29:34 AM
Methylene Chloride	ND	3.0		µg/L	1	9/1/2012 2:29:34 AM
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2012 2:29:34 AM
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Styrene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2012 2:29:34 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2012 2:29:34 AM
Vinyl chloride	ND	1.0		µg/L	1	9/1/2012 2:29:34 AM
Xylenes, Total	ND	1.5		µg/L	1	9/1/2012 2:29:34 AM
Surr: 1,2-Dichloroethane-d4	84.8	70-130		%REC	1	9/1/2012 2:29:34 AM
Surr: 4-Bromofluorobenzene	87.0	70-130		%REC	1	9/1/2012 2:29:34 AM
Surr: Dibromofluoromethane	87.9	70-130		%REC	1	9/1/2012 2:29:34 AM
Surr: Toluene-d8	84.1	70-130		%REC	1	9/1/2012 2:29:34 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B41

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 11:30:00 AM

Lab ID: 1208B41-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Toluene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Ethylbenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Naphthalene	ND	2.0		µg/L	1	9/1/2012 2:57:21 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 2:57:21 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 2:57:21 AM
Acetone	ND	10		µg/L	1	9/1/2012 2:57:21 AM
Bromobenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Bromoform	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Bromomethane	ND	3.0		µg/L	1	9/1/2012 2:57:21 AM
2-Butanone	ND	10		µg/L	1	9/1/2012 2:57:21 AM
Carbon disulfide	ND	10		µg/L	1	9/1/2012 2:57:21 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Chlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Chloroethane	ND	2.0		µg/L	1	9/1/2012 2:57:21 AM
Chloroform	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Chloromethane	ND	3.0		µg/L	1	9/1/2012 2:57:21 AM
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2012 2:57:21 AM
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Dibromomethane	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2012 2:57:21 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
2-Hexanone	ND	10		µg/L	1	9/1/2012 2:57:21 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B41

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 11:30:00 AM

Lab ID: 1208B41-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2012 2:57:21 AM
Methylene Chloride	ND	3.0		µg/L	1	9/1/2012 2:57:21 AM
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2012 2:57:21 AM
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Styrene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2012 2:57:21 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2012 2:57:21 AM
Vinyl chloride	ND	1.0		µg/L	1	9/1/2012 2:57:21 AM
Xylenes, Total	ND	1.5		µg/L	1	9/1/2012 2:57:21 AM
Surr: 1,2-Dichloroethane-d4	83.3	70-130		%REC	1	9/1/2012 2:57:21 AM
Surr: 4-Bromofluorobenzene	84.4	70-130		%REC	1	9/1/2012 2:57:21 AM
Surr: Dibromofluoromethane	84.7	70-130		%REC	1	9/1/2012 2:57:21 AM
Surr: Toluene-d8	82.0	70-130		%REC	1	9/1/2012 2:57:21 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits



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

Tax I.D. 62-0814299

Est. 1970

REPORT OF ANALYSIS

August 31, 2012

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

Date Received : August 28, 2012
Description :
Sample ID : 1208B41-001F PW-3
Collected By :
Collection Date : 08/24/12 06:50

ESC Sample # : L592137-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Cyanide	0.0085	0.0050	mg/l	4500CN-E	08/31/12	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 08/31/12 15:12 Printed: 08/31/12 15:13



YOUR LAB OF CHOICE

Hall Environmental Analysis Laboratory
Anne Thorne
4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report
Level II

L592137

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

August 31, 2012

Laboratory Blank		Units		% Rec		Limit		Batch		Date Analyzed	
Analyte	Result	Units	Result	Units	% Rec	Limit	RPD	Batch	Ref Samp	Date Analyzed	Batch
Cyanide	< .005	mg/l						WG610073		08/31/12 11:16	
Duplicate		Units		% Rec		Limit		Batch		Date Analyzed	
Analyte	Result	Units	Result	Units	% Rec	Limit	RPD	Batch	Ref Samp	Date Analyzed	Batch
Cyanide	0	mg/l	0	mg/l	0	20		WG610073	L592127-01		
Cyanide	0	mg/l	0	mg/l	0	20		WG610073	L592289-02		
Laboratory Control Sample		Units		% Rec		Limit		Batch		Date Analyzed	
Analyte	Result	Units	Result	Units	% Rec	Limit	RPD	Batch	Ref Samp	Date Analyzed	Batch
Cyanide	.1	mg/l	0.102	mg/l	102.	90-110		WG610073			
Laboratory Control Sample Duplicate		Units		% Rec		Limit		Batch		Date Analyzed	
Analyte	Result	Units	Result	Units	% Rec	Limit	RPD	Batch	Ref Samp	Date Analyzed	Batch
Cyanide	0.102	mg/l	0.102	mg/l	102.	90-110	0	WG610073			
Matrix Spike		Units		% Rec		Limit		Batch		Date Analyzed	
Analyte	Result	Units	Result	Units	% Rec	Limit	RPD	Batch	Ref Samp	Date Analyzed	Batch
Cyanide	0.104	mg/l	0	mg/l	52.0*	90-110		WG610073	L592110-02		
Matrix Spike Duplicate		Units		% Rec		Limit		Batch		Date Analyzed	
Analyte	Result	Units	Result	Units	% Rec	Limit	RPD	Batch	Ref Samp	Date Analyzed	Batch
Cyanide	0.0972	mg/l	0.104	mg/l	48.6*	90-110	6.76	WG610073	L592110-02		

Batch number /Run number / Sample number cross reference

WG610073: R2326054: L592137-01

* * Calculations are performed prior to rounding of reported values.

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID MB	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: R5457		RunNo: 5457							
Prep Date:	Analysis Date: 9/12/2012		SeqNo: 155926		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								
Lead	ND	0.0050								
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: R5457		RunNo: 5457							
p Date:	Analysis Date: 9/12/2012		SeqNo: 155927		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	0.51	0.0020	0.5000	0	101	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.50	0.020	0.5000	0.002590	99.7	85	115			
Lead	0.50	0.0050	0.5000	0	100	85	115			
Magnesium	53	1.0	50.00	0	106	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	52	1.0	50.00	0	105	85	115			
Zinc	0.49	0.010	0.5000	0	99.0	85	115			

Sample ID 1208996-003DMS	SampType: MS		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: BatchQC	Batch ID: R5457		RunNo: 5457							
Prep Date:	Analysis Date: 9/12/2012		SeqNo: 156329		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.65	0.0020	0.5000	0.1271	105	70	130			
Cadmium	0.53	0.0020	0.5000	0	105	70	130			
Chromium	0.52	0.0060	0.5000	0.001070	103	70	130			
Copper	0.56	0.0060	0.5000	0	112	70	130			

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156329	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.56	0.020	0.5000	0.04012	104	70	130			
Lead	0.51	0.0050	0.5000	0	102	70	130			
Magnesium	69	1.0	50.00	13.55	112	70	130			
Manganese	0.53	0.0020	0.5000	0.0006300	106	70	130			
Potassium	56	1.0	50.00	2.284	108	70	130			
Silver	0.10	0.0050	0.1000	0	103	70	130			
Sodium	83	1.0	50.00	27.29	111	70	130			
Zinc	0.52	0.010	0.5000	0.01358	101	70	130			

Sample ID	1208996-003DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156330	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.63	0.0020	0.5000	0.1271	101	70	130	3.05	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	2.73	20	
Chromium	0.50	0.0060	0.5000	0.001070	99.7	70	130	3.48	20	
Copper	0.55	0.0060	0.5000	0	110	70	130	1.68	20	
Iron	0.56	0.020	0.5000	0.04012	103	70	130	0.424	20	
Lead	0.50	0.0050	0.5000	0	99.2	70	130	2.65	20	
Magnesium	68	1.0	50.00	13.55	109	70	130	1.63	20	
Manganese	0.52	0.0020	0.5000	0.0006300	103	70	130	2.93	20	
Potassium	55	1.0	50.00	2.284	106	70	130	1.53	20	
Silver	0.099	0.0050	0.1000	0	99.4	70	130	3.30	20	
Sodium	82	1.0	50.00	27.29	109	70	130	0.982	20	
Zinc	0.50	0.010	0.5000	0.01358	96.5	70	130	4.24	20	

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156332	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	370	5.0	250.0	66.77	122	70	130			

Sample ID	1208996-003DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156333	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	330	5.0	250.0	66.77	106	70	130	11.7	20	

Qualifiers:

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

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156417	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								
Lead	ND	0.0050								
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:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156418	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.001060	97.0	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.3	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	95.5	85	115			
Copper	0.52	0.0060	0.5000	0	104	85	115			
Iron	0.50	0.020	0.5000	0.003080	99.0	85	115			
Lead	0.47	0.0050	0.5000	0	94.1	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Potassium	49	1.0	50.00	0	98.4	85	115			
Silver	0.10	0.0050	0.1000	0.001260	98.6	85	115			
Sodium	51	1.0	50.00	0	103	85	115			
Zinc	0.46	0.010	0.5000	0	92.6	85	115			

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156420	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0.007580	89.5	70	130			
Cadmium	0.46	0.0020	0.5000	0.001310	92.5	70	130			
Chromium	0.44	0.0060	0.5000	0	88.1	70	130			
Copper	0.55	0.0060	0.5000	0.04934	99.8	70	130			

Modifiers:

Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156420	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.47	0.020	0.5000	0.003920	92.6	70	130			
Magnesium	78	1.0	50.00	28.77	99.1	70	130			
Potassium	50	1.0	50.00	1.179	97.1	70	130			
Silver	0.093	0.0050	0.1000	0	93.0	70	130			
Sodium	60	1.0	50.00	9.466	102	70	130			
Zinc	0.90	0.010	0.5000	0.5237	75.6	70	130			

Sample ID	1208A83-002AMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156421	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0.007580	88.6	70	130	0.945	20	
Cadmium	0.46	0.0020	0.5000	0.001310	91.1	70	130	1.54	20	
Chromium	0.43	0.0060	0.5000	0	86.4	70	130	1.96	20	
Copper	0.55	0.0060	0.5000	0.04934	99.3	70	130	0.477	20	
Iron	0.46	0.020	0.5000	0.003920	91.1	70	130	1.62	20	
Magnesium	78	1.0	50.00	28.77	98.2	70	130	0.598	20	
Potassium	49	1.0	50.00	1.179	96.4	70	130	0.773	20	
Silver	0.093	0.0050	0.1000	0	93.1	70	130	0.150	20	
Sodium	60	1.0	50.00	9.466	101	70	130	0.803	20	
Zinc	0.89	0.010	0.5000	0.5237	72.8	70	130	1.59	20	

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156423	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130			
Manganese	4.3	0.010	2.500	1.779	99.4	70	130			

Sample ID	1208A83-002AMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156424	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130	0.395	20	
Manganese	4.3	0.010	2.500	1.779	102	70	130	1.46	20	

Qualifiers:

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

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3526	SampType:	MBLK	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	PBW	Batch ID:	3526	RunNo:	5404					
Prep Date:	8/29/2012	Analysis Date:	9/10/2012	SeqNo:	154029	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								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID	LCS-3526	SampType:	LCS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	LCSW	Batch ID:	3526	RunNo:	5404					
Prep Date:	8/29/2012	Analysis Date:	9/10/2012	SeqNo:	154030	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	0.51	0.0020	0.5000	0	102	85	115			
Chromium	0.50	0.0060	0.5000	0	99.0	85	115			
Copper	0.50	0.0060	0.5000	0	99.4	85	115			
Iron	0.49	0.020	0.5000	0	98.4	85	115			
Lead	0.49	0.0050	0.5000	0	98.7	85	115			
Manganese	0.48	0.0020	0.5000	0	96.1	85	115			
Zinc	0.49	0.010	0.5000	0	98.1	85	115			

Sample ID	1208B33-003EMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	3526	RunNo:	5404					
Prep Date:	8/29/2012	Analysis Date:	9/10/2012	SeqNo:	154057	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	0.57	0.0020	0.5000	0.04450	106	70	130			
Cadmium	0.54	0.0020	0.5000	0	107	70	130			
Chromium	0.51	0.0060	0.5000	0	103	70	130			
Copper	0.57	0.0060	0.5000	0	114	70	130			
Iron	0.66	0.020	0.5000	0.1192	108	70	130			
Lead	0.52	0.0050	0.5000	0	105	70	130			
Manganese	0.68	0.0020	0.5000	0.1610	104	70	130			
Zinc	0.53	0.010	0.5000	0.001530	106	70	130			

Sample ID	1208B33-003EMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	3526	RunNo:	5404					
Prep Date:	8/29/2012	Analysis Date:	9/10/2012	SeqNo:	154058	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B33-003EMSD		SampType: MSD		TestCode: EPA Method 200.7: Total Metals					
Client ID:	BatchQC		Batch ID: 3526		RunNo: 5404					
Prep Date:	8/29/2012		Analysis Date: 9/10/2012		SeqNo: 154058		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.56	0.0020	0.5000	0.04450	104	70	130	1.69	20	
Cadmium	0.53	0.0020	0.5000	0	106	70	130	1.27	20	
Chromium	0.51	0.0060	0.5000	0	101	70	130	1.19	20	
Copper	0.56	0.0060	0.5000	0	112	70	130	1.83	20	
Iron	0.65	0.020	0.5000	0.1192	105	70	130	2.21	20	
Lead	0.52	0.0050	0.5000	0	103	70	130	1.18	20	
Manganese	0.67	0.0020	0.5000	0.1610	101	70	130	2.31	20	
Zinc	0.53	0.010	0.5000	0.001530	105	70	130	1.02	20	

Sample ID	MB-3526	SampType:	MBLK	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	PBW	Batch ID:	3526	RunNo:	5435					
Prep Date:	8/29/2012	Analysis Date:	9/11/2012	SeqNo:	155084	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID	LCS-3526	SampType:	LCS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	LCSW	Batch ID:	3526	RunNo:	5435					
Prep Date:	8/29/2012	Analysis Date:	9/11/2012	SeqNo:	155085	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	96.8	85	115			

Sample ID	1208B33-003EMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	3526	RunNo:	5435					
Prep Date:	8/29/2012	Analysis Date:	9/11/2012	SeqNo:	155112	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.065	0.0050	0.1000	0	64.6	70	130			S

Sample ID	1208B33-003EMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	3526	RunNo:	5435					
Prep Date:	8/29/2012	Analysis Date:	9/11/2012	SeqNo:	155113	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.069	0.0050	0.1000	0	69.3	70	130	6.99	20	S

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Tall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3526		SampType:	MBLK		TestCode:	EPA 200.8: Metals			
Client ID:	PBW		Batch ID:	3526		RunNo:	5235			
Prep Date:	8/29/2012		Analysis Date:	8/30/2012		SeqNo:	148847		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								
Uranium	ND	0.0025								

Sample ID	LCS		SampType:	LCS		TestCode:	EPA 200.8: Metals			
Client ID:	LCSW		Batch ID:	R5425		RunNo:	5425			
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	154891		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	102	85	115			

Sample ID	MB		SampType:	MBLK		TestCode:	EPA 200.8: Metals			
Client ID:	PBW		Batch ID:	R5425		RunNo:	5425			
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	154893		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	1208932-004AMS		SampType:	MS		TestCode:	EPA 200.8: Metals			
Client ID:	BatchQC		Batch ID:	R5425		RunNo:	5425			
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155236		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.030	0.0010	0.02500	0.005874	96.1	70	130			
Selenium	0.026	0.0010	0.02500	0.002644	93.5	70	130			

Sample ID	1208C61-004AMS		SampType:	MS		TestCode:	EPA 200.8: Metals			
Client ID:	BatchQC		Batch ID:	R5425		RunNo:	5425			
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155243		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0.001791	98.5	70	130			
Selenium	0.027	0.0010	0.02500	0.002323	100	70	130			

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType:	LCS		TestCode:	EPA 200.8: Metals			
Client ID:	LCSW		Batch ID:	R5425		RunNo:	5425			
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155260		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Sample ID	MB		SampType:	MBLK		TestCode:	EPA 200.8: Metals			
Client ID:	PBW		Batch ID:	R5425		RunNo:	5425			
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155261		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R5425		RunNo: 5425					
Prep Date:			Analysis Date: 9/11/2012		SeqNo: 154883		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	102	85	115			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5425	RunNo:	5425					
Prep Date:		Analysis Date:	9/11/2012	SeqNo:	154885	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	1208C13-004AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5425		RunNo:	5425				
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155231	Units:	mg/L		
lyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.026	0.0010	0.02500	0.0002387	103	70	130				
Selenium	0.026	0.0010	0.02500	0.0004619	104	70	130				

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3526	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3526	RunNo:	5235					
Prep Date:	8/29/2012	Analysis Date:	8/30/2012	SeqNo:	148880	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								
Uranium	ND	0.0025								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3705	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156146	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-3705	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156147	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.9	80	120			

Sample ID	1208A83-001BMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156149	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	98.2	75	125			

Sample ID	1208A83-001BMSD	SampType:	MSD	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156150	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	97.7	75	125	0.517	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B39-001BMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5125	RunNo:	5125					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	145633	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.2	0.10	0.5000	0.7261	87.5	76.6	110			
Chloride	9.9	0.50	5.000	4.684	105	87.8	111			
Bromide	2.5	0.10	2.500	0.09394	94.3	83.3	107			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	97.0	74.5	115			
Sulfate	29	0.50	10.00	18.80	104	84.6	122			

Sample ID	1208B39-001BMSD			SampType:	MSD		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5125		RunNo:	5125				
Prep Date:			Analysis Date:	8/27/2012		SeqNo:	145634		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	1.2	0.10	0.5000	0.7261	87.9	76.6	110	0.136	20		
Chloride	9.8	0.50	5.000	4.684	103	87.8	111	1.03	20		
Bromide	2.4	0.10	2.500	0.09394	92.3	83.3	107	2.02	20		
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	95.4	74.5	115	1.64	20		
Sulfate	29	0.50	10.00	18.80	100	84.6	122	1.21	20		

Sample ID	1208B66-001BMS			SampType:	MS		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC			Batch ID:	R5125		RunNo:	5125			
Prep Date:				Analysis Date:	8/27/2012		SeqNo:	145645		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	2.4	0.10	0.5000	1.973	90.8	76.6	110				
Chloride	18	0.50	5.000	11.71	117	87.8	111			S	
Bromide	2.2	0.10	2.500	0	89.4	83.3	107				
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	101	74.5	115				

Sample ID	1208B66-001BMSD			SampType:	MSD		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5125		RunNo:	5125				
Prep Date:			Analysis Date:	8/27/2012		SeqNo:	145646		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Fluoride	2.4	0.10	0.5000	1.973	95.3	76.6	110	0.921	20		
Chloride	18	0.50	5.000	11.71	119	87.8	111	0.300	20	S	
Bromide	2.2	0.10	2.500	0	89.1	83.3	107	0.390	20		
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	99.9	74.5	115	0.717	20		

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5125	RunNo:	5125					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	145648	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
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB		SampType:	MBLK		TestCode:	EPA Method 300.0: Anions			
Client ID:	PBW		Batch ID:	R5125		RunNo:	5125			
Prep Date:			Analysis Date:	8/27/2012		SeqNo:	145648		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								

Sample ID	LCS-b		SampType:	LCS		TestCode:	EPA Method 300.0: Anions			
Client ID:	LCSW		Batch ID:	R5125		RunNo:	5125			
Prep Date:			Analysis Date:	8/27/2012		SeqNo:	145649		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	97.3	90	110			
Chloride	4.8	0.50	5.000	0	96.0	90	110			
Bromide	2.4	0.10	2.500	0	94.3	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	100	90	110			
Sulfate	9.5	0.50	10.00	0	95.2	90	110			

Sample ID	MB		SampType:	MBLK		TestCode:	EPA Method 300.0: Anions			
Client ID:	PBW		Batch ID:	R5323		RunNo:	5323			
Prep Date:			Analysis Date:	9/5/2012		SeqNo:	151555		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:	R5323		RunNo:	5323			
Prep Date:			Analysis Date:	9/5/2012		SeqNo:	151556		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.5	90	110			

Sample ID	1209065-001AMS		SampType:	MS		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5323		RunNo:	5323			
Prep Date:			Analysis Date:	9/5/2012		SeqNo:	151558		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	5.8	0.20	3.500	2.072	107	88.6	110			

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1209065-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151559	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	5.8	0.20	3.500	2.072	107	88.6	110	0.218	20	

Sample ID	1209077-005AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151574	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	6.4	0.20	3.500	2.865	102	88.6	110			

Sample ID	1209077-005AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151575	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	6.5	0.20	3.500	2.865	103	88.6	110	0.477	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B41

Fall Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID b3	SampType: MBLK		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150165		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								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.5	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		82.2	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.5	70	130			
Surr: Toluene-d8	7.3		10.00		73.3	70	130			

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: LCSW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150166		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	19	1.0	20.00	0	96.2	80	120			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.9	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.4	70	130			
Surr: Toluene-d8	8.0		10.00		79.7	70	130			

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: 5ml-rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150096		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								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B41

All Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150096	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.5	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		87.2	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.5	70	130			
Surr: Toluene-d8	8.1		10.00		80.9	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150102	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.0	70	130			
Toluene	20	1.0	20.00	0	98.3	80	120			
Chlorobenzene	19	1.0	20.00	0	95.3	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	92.3	73.7	122			
Trichloroethene (TCE)	18	1.0	20.00	0	92.0	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.3	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		83.2	70	130			

Flags:

V Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150102	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	8.3		10.00		83.1	70	130			
Surr: Toluene-d8	8.6		10.00		86.0	70	130			

Sample ID	1208b33-001a ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150105	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.2	66.8	128			
Toluene	19	1.0	20.00	0	93.4	70	130			
Chlorobenzene	18	1.0	20.00	0	87.7	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.8	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.7	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		81.9	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.3	70	130			
Surr: Toluene-d8	8.1		10.00		80.9	70	130			

Sample ID	1208b33-001a msd			SampType:	MSD						TestCode:	EPA Method 8260B: VOLATILES						
Client ID:	BatchQC			Batch ID:	R5276						RunNo:	5276						
Prep Date:				Analysis Date:	8/31/2012						SeqNo:	150106		Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual								
Benzene	19	1.0	20.00	0	93.0	66.8	128	3.31	16.7									
Toluene	18	1.0	20.00	0	92.1	70	130	1.37	18.7									
Chlorobenzene	18	1.0	20.00	0	88.2	70	130	0.567	19.5									
1,1-Dichloroethene	18	1.0	20.00	0	88.3	70	130	3.50	16.7									
Trichloroethene (TCE)	16	1.0	20.00	0	80.0	70	130	9.39	17.5									
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.8	70	130	0	0									
Surr: 4-Bromofluorobenzene	8.4		10.00		83.7	70	130	0	0									
Surr: Dibromofluoromethane	8.2		10.00		82.3	70	130	0	0									
Surr: Toluene-d8	8.4		10.00		83.6	70	130	0	0									

Sample ID	b3	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R5276		RunNo:	5276				
Prep Date:		Analysis Date:	8/31/2012		SeqNo:	150141	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								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID b3	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150141		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
oethane	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								
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								

ifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	b3	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150141	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.5	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		82.2	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.5	70	130			
Surr: Toluene-d8	7.3		10.00		73.3	70	130			

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150143	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	19	1.0	20.00	0	96.2	80	120			
Chlorobenzene	18	1.0	20.00	0	90.4	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	87.5	73.7	122			
Trichloroethene (TCE)	17	1.0	20.00	0	83.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.9	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.4	70	130			
Surr: Toluene-d8	8.0		10.00		79.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208b42-003a.ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	9/1/2012	SeqNo:	150144	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.1	66.8	128			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	92.5	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	89.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.8	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.7	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.6	70	130			
Surr: Toluene-d8	8.7		10.00		87.0	70	130			

Sample ID	1208b42-003a msd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	9/1/2012	SeqNo:	150145	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.7	66.8	128	5.60	16.7	
Toluene	19	1.0	20.00	0	93.1	70	130	11.3	18.7	
Chlorobenzene	19	1.0	20.00	0	92.5	70	130	9.49	19.5	
1,1-Dichloroethene	18	1.0	20.00	0	88.4	70	130	4.61	16.7	
Trichloroethene (TCE)	17	1.0	20.00	0	84.3	70	130	5.77	17.5	
Surr: 1,2-Dichloroethane-d4	8.3		10.00		82.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.6		10.00		85.7	70	130	0	0	
Surr: Dibromofluoromethane	8.4		10.00		83.9	70	130	0	0	
Surr: Toluene-d8	8.6		10.00		85.5	70	130	0	0	

Sample ID	b7	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R5276			RunNo: 5276					
Prep Date:		Analysis Date: 9/1/2012			SeqNo: 150170		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								

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: b7	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R5276	RunNo: 5276								
Prep Date:	Analysis Date: 9/1/2012	SeqNo: 150170	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
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								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B41

All Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID b7	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 9/1/2012		SeqNo: 150170		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.8	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.7	70	130			
Surr: Toluene-d8	8.2		10.00		82.4	70	130			

Sample ID 100ng lcs3	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 9/1/2012		SeqNo: 150173		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.7	70	130			
Toluene	19	1.0	20.00	0	94.8	80	120			
Chlorobenzene	18	1.0	20.00	0	92.3	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	87.5	73.7	122			
Trichloroethene (TCE)	17	1.0	20.00	0	86.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.1	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		82.6	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.7	70	130			
Surr: Toluene-d8	8.2		10.00		81.7	70	130			

Sample ID 1208c45-009a ms	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: BatchQC	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 9/1/2012		SeqNo: 150176		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.6	66.8	128			
Toluene	19	1.0	20.00	0	95.4	70	130			
Chlorobenzene	18	1.0	20.00	0	89.0	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.1	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0.3838	86.1	70	130			

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208c45-009a ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	9/1/2012	SeqNo:	150176	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.7	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.7	70	130			
Surr: Dibromofluoromethane	8.8		10.00		87.8	70	130			
Surr: Toluene-d8	8.3		10.00		82.6	70	130			

Sample ID	1208c45-009a msd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	9/1/2012	SeqNo:	150177	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.2	66.8	128	5.78	16.7	
Toluene	19	1.0	20.00	0	93.6	70	130	1.86	18.7	
Chlorobenzene	18	1.0	20.00	0	89.4	70	130	0.446	19.5	
1,1-Dichloroethene	17	1.0	20.00	0	85.0	70	130	6.99	16.7	
Trichloroethene (TCE)	16	1.0	20.00	0.3838	80.3	70	130	6.85	17.5	
Surr: 1,2-Dichloroethane-d4	8.0		10.00		79.9	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.8		10.00		88.2	70	130	0	0	
Surr: Dibromofluoromethane	7.8		10.00		77.5	70	130	0	0	
Surr: Toluene-d8	8.3		10.00		82.9	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B41

all Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3505	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3505	RunNo:	5155					
Prep Date:	8/28/2012	Analysis Date:	8/28/2012	SeqNo:	146455	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								
mophenyl phenyl ether	ND	10								
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								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								

ifiers:

Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: mb-3505	SampType: MBLK	TestCode: EPA Method 8270C: Semivolatiles								
Client ID: PBW	Batch ID: 3505	RunNo: 5155								
Prep Date: 8/28/2012	Analysis Date: 8/28/2012	SeqNo: 146455			Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	20								
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: 2,4,6-Tribromophenol	100		200.0		50.6	44.2	126			
Surr: 2-Fluorobiphenyl	40		100.0		40.2	37	114			
Surr: 2-Fluorophenol	75		200.0		37.6	23.4	98			
Surr: 4-Terphenyl-d14	48		100.0		47.9	41.3	116			
Surr: Nitrobenzene-d5	45		100.0		45.2	39.5	118			
Surr: Phenol-d5	65		200.0		32.4	20.9	95.9			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B41

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	ics-3505	SampType:	LCS	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSSW	Batch ID:	3505	RunNo:	5155					
Prep Date:	8/28/2012	Analysis Date:	8/28/2012	SeqNo:	146457	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	59.7	38.2	99.4			
4-Chloro-3-methylphenol	140	10	200.0	0	68.5	35.5	108			
2-Chlorophenol	110	10	200.0	0	56.0	29.8	106			
1,4-Dichlorobenzene	44	10	100.0	0	44.5	32.6	91.5			
2,4-Dinitrotoluene	75	10	100.0	0	74.6	44.7	112			
N-Nitrosodi-n-propylamine	65	10	100.0	0	65.1	38.5	105			
4-Nitrophenol	100	10	200.0	0	49.9	11.6	73.1			
Pentachlorophenol	130	20	200.0	0	64.4	20.2	93			
Phenol	82	10	200.0	0	41.2	23	66.1			
Pyrene	59	10	100.0	0	59.2	40.1	101			
1,2,4-Trichlorobenzene	52	10	100.0	0	51.6	37.7	99.1			
Surr: 2,4,6-Tribromophenol	170		200.0		83.6	44.2	126			
Surr: 2-Fluorobiphenyl	59		100.0		58.7	37	114			
Surr: 2-Fluorophenol	100		200.0		51.2	23.4	98			
Surr: 4-Terphenyl-d14	68		100.0		68.3	41.3	116			
Surr: Nitrobenzene-d5	61		100.0		60.5	39.5	118			
Surr: Phenol-d5	86		200.0		43.1	20.9	95.9			

Sample ID	icsd-3505	SampType:	LCSD	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02	Batch ID:	3505	RunNo:	5155					
Prep Date:	8/28/2012	Analysis Date:	8/28/2012	SeqNo:	146459	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	59	10	100.0	0	58.5	38.2	99.4	2.03	20	
4-Chloro-3-methylphenol	140	10	200.0	0	68.1	35.5	108	0.512	20	
2-Chlorophenol	120	10	200.0	0	58.1	29.8	106	3.61	20	
1,4-Dichlorobenzene	45	10	100.0	0	44.7	32.6	91.5	0.583	20	
2,4-Dinitrotoluene	74	10	100.0	0	73.7	44.7	112	1.21	20	
N-Nitrosodi-n-propylamine	65	10	100.0	0	65.0	38.5	105	0.154	20	
4-Nitrophenol	94	10	200.0	0	47.0	11.6	73.1	5.86	20	
Pentachlorophenol	130	20	200.0	0	63.8	20.2	93	0.968	20	
Phenol	82	10	200.0	0	41.1	23	66.1	0.170	20	
Pyrene	64	10	100.0	0	64.4	40.1	101	8.28	20	
1,2,4-Trichlorobenzene	57	10	100.0	0	57.2	37.7	99.1	10.3	20	
Surr: 2,4,6-Tribromophenol	170		200.0		86.3	44.2	126	0	0	
Surr: 2-Fluorobiphenyl	63		100.0		63.0	37	114	0	0	
Surr: 2-Fluorophenol	97		200.0		48.6	23.4	98	0	0	
Surr: 4-Terphenyl-d14	71		100.0		71.1	41.3	116	0	0	
Surr: Nitrobenzene-d5	70		100.0		69.6	39.5	118	0	0	
Surr: Phenol-d5	88		200.0		44.2	20.9	95.9	0	0	

ifiers:

Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87105
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: 1208B41

Received by/date:

Logged By: Anne Thorne

8/24/2012 3:40:00 PM

Completed By: Anne Thorne

8/27/2012

Reviewed By:

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA
11. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials
12. Were any sample containers received broken? Yes ☒ No ☐
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐ # of preserved bottles checked for pH: 3
(<2 or >12 unless noted)
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐ Adjusted? ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: [Signature]

Special Handling (if applicable)

17. 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:

18. Additional remarks:

19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Western Refining

Mailing Address: Rt 3 Box 7

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 10

Date Time Matrix Sample Request ID

8/24/12 0650 GW PW-3

8/24/12 1130 W Field Blank

8/24/12 -- W Trip Blank

8/24/12 -- W Trip Blank

8/24/12 -- W Trip Blank

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8/24/12 -- W Trip Blank

☐ Standard ☐ Rush

Project Name:

3rd QTR 2012 Groundwater

Project #:

Annual Sampling

Project Manager:

Cheryl Johnson

Container Type and #

Preservative Type

HEAL No.

1208B41

9

3

3

1208B41

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Date: 8/24/12

Time: 1540

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Date: 8/24/12

Time: 1540

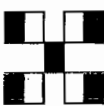
Date: 8/24/12

Time: 1540

Date: 8/24/12

Time: 1540

Remarks:



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

WQCC Metals (Total and Dissolved)

Cyanide

Nitrates

Air Bubbles (Y or N)



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

September 25, 2012

Cheryl Johnson

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-0231

FAX (505) 722-0210

RE: 3rd QTR 2012 Groundwater Sampling

OrderNo.: 1208B42

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/24/2012 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. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. 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.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:30:00 AM

Lab ID: 1208B42-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/28/2012 8:24:13 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 8:24:13 AM
Surr: DNOP	138	79.5-166		%REC	1	8/28/2012 8:24:13 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/30/2012 10:32:20 PM
Surr: BFB	102	69.8-119		%REC	1	8/30/2012 10:32:20 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.67	0.10		mg/L	1	8/27/2012 10:49:29 PM
Chloride	47	10		mg/L	20	8/27/2012 11:01:54 PM
Bromide	ND	0.10		mg/L	1	8/27/2012 10:49:29 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/27/2012 10:49:29 PM
Sulfate	140	10		mg/L	20	8/27/2012 11:01:54 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/28/2012 9:50:06 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.012	0.0020		mg/L	1	9/13/2012 11:45:03 AM
Cadmium	ND	0.0020		mg/L	1	9/13/2012 11:45:03 AM
Calcium	1.6	1.0		mg/L	1	9/13/2012 11:45:03 AM
Chromium	ND	0.0060		mg/L	1	9/13/2012 11:45:03 AM
Copper	ND	0.0060		mg/L	1	9/13/2012 11:45:03 AM
Iron	ND	0.020		mg/L	1	9/13/2012 11:45:03 AM
Lead	ND	0.0050		mg/L	1	9/13/2012 11:45:03 AM
Magnesium	ND	1.0		mg/L	1	9/13/2012 11:45:03 AM
Manganese	ND	0.0020		mg/L	1	9/13/2012 11:45:03 AM
Potassium	ND	1.0		mg/L	1	9/13/2012 11:45:03 AM
Silver	ND	0.0050		mg/L	1	9/13/2012 11:45:03 AM
Sodium	260	5.0		mg/L	5	9/13/2012 11:49:00 AM
Zinc	ND	0.010		mg/L	1	9/13/2012 11:45:03 AM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.014	0.0020		mg/L	1	9/11/2012 12:26:29 PM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 12:26:29 PM
Chromium	ND	0.0060		mg/L	1	9/11/2012 12:26:29 PM
Copper	ND	0.0060		mg/L	1	9/11/2012 12:26:29 PM
Iron	0.078	0.020		mg/L	1	9/11/2012 12:26:29 PM
Lead	ND	0.0050		mg/L	1	9/11/2012 12:26:29 PM
Manganese	0.0071	0.0020		mg/L	1	9/11/2012 12:26:29 PM
Silver	ND	0.0050		mg/L	1	9/11/2012 12:26:29 PM
Zinc	ND	0.010		mg/L	1	9/11/2012 12:26:29 PM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0013	0.0010		mg/L	1	9/11/2012 1:04:03 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:30:00 AM

Lab ID: 1208B42-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Selenium	ND	0.0010		mg/L	1	9/11/2012 1:04:03 PM
Uranium	0.011	0.0010		mg/L	1	9/11/2012 1:04:03 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 6:23:08 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:23:08 PM
Uranium	0.011	0.0025		mg/L	2.5	9/13/2012 1:58:18 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:23:20 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Acenaphthylene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Aniline	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Anthracene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Azobenzene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Benz(a)anthracene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Benzoic acid	ND	20		µg/L	1	8/28/2012 6:52:13 PM
Benzyl alcohol	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/28/2012 6:52:13 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Carbazole	ND	10		µg/L	1	8/28/2012 6:52:13 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/28/2012 6:52:13 PM
4-Chloroaniline	ND	10		µg/L	1	8/28/2012 6:52:13 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
2-Chlorophenol	ND	10		µg/L	1	8/28/2012 6:52:13 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Chrysene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Dibenzofuran	ND	10		µg/L	1	8/28/2012 6:52:13 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 6:52:13 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:30:00 AM

Lab ID: 1208B42-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Diethyl phthalate	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Dimethyl phthalate	ND	10		µg/L	1	8/28/2012 6:52:13 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/28/2012 6:52:13 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/28/2012 6:52:13 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/28/2012 6:52:13 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/28/2012 6:52:13 PM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Fluoranthene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Fluorene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Hexachlorobenzene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Hexachloroethane	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Isophorone	ND	10		µg/L	1	8/28/2012 6:52:13 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
2-Methylphenol	ND	10		µg/L	1	8/28/2012 6:52:13 PM
3+4-Methylphenol	ND	10		µg/L	1	8/28/2012 6:52:13 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/28/2012 6:52:13 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/28/2012 6:52:13 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Naphthalene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
2-Nitroaniline	ND	10		µg/L	1	8/28/2012 6:52:13 PM
3-Nitroaniline	ND	10		µg/L	1	8/28/2012 6:52:13 PM
4-Nitroaniline	ND	20		µg/L	1	8/28/2012 6:52:13 PM
Nitrobenzene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
2-Nitrophenol	ND	10		µg/L	1	8/28/2012 6:52:13 PM
4-Nitrophenol	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Pentachlorophenol	ND	20		µg/L	1	8/28/2012 6:52:13 PM
Phenanthrene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Phenol	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Pyrene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Pyridine	ND	10		µg/L	1	8/28/2012 6:52:13 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/28/2012 6:52:13 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/28/2012 6:52:13 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/28/2012 6:52:13 PM
Surr: 2,4,6-Tribromophenol	82.0	44.2-126		%REC	1	8/28/2012 6:52:13 PM
Surr: 2-Fluorobiphenyl	61.3	37-114		%REC	1	8/28/2012 6:52:13 PM

Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:30:00 AM

Lab ID: 1208B42-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorophenol	46.0	23.4-98		%REC	1	8/28/2012 6:52:13 PM
Surr: 4-Terphenyl-d14	69.0	41.3-116		%REC	1	8/28/2012 6:52:13 PM
Surr: Nitrobenzene-d5	62.5	39.5-118		%REC	1	8/28/2012 6:52:13 PM
Surr: Phenol-d5	41.0	20.9-95.9		%REC	1	8/28/2012 6:52:13 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Toluene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Ethylbenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Naphthalene	ND	2.0		µg/L	1	9/1/2012 3:24:51 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 3:24:51 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 3:24:51 AM
Acetone	ND	10		µg/L	1	9/1/2012 3:24:51 AM
Bromobenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Bromoform	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Bromomethane	ND	3.0		µg/L	1	9/1/2012 3:24:51 AM
2-Butanone	ND	10		µg/L	1	9/1/2012 3:24:51 AM
Carbon disulfide	ND	10		µg/L	1	9/1/2012 3:24:51 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Chlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Chloroethane	ND	2.0		µg/L	1	9/1/2012 3:24:51 AM
Chloroform	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Chloromethane	ND	3.0		µg/L	1	9/1/2012 3:24:51 AM
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2012 3:24:51 AM
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Dibromomethane	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:30:00 AM

Lab ID: 1208B42-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2012 3:24:51 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
2-Hexanone	ND	10		µg/L	1	9/1/2012 3:24:51 AM
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2012 3:24:51 AM
Methylene Chloride	ND	3.0		µg/L	1	9/1/2012 3:24:51 AM
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2012 3:24:51 AM
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Styrene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2012 3:24:51 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2012 3:24:51 AM
Vinyl chloride	ND	1.0		µg/L	1	9/1/2012 3:24:51 AM
Xylenes, Total	ND	1.5		µg/L	1	9/1/2012 3:24:51 AM
Surr: 1,2-Dichloroethane-d4	83.6	70-130		%REC	1	9/1/2012 3:24:51 AM
Surr: 4-Bromofluorobenzene	89.8	70-130		%REC	1	9/1/2012 3:24:51 AM
Surr: Dibromofluoromethane	89.2	70-130		%REC	1	9/1/2012 3:24:51 AM
Surr: Toluene-d8	83.7	70-130		%REC	1	9/1/2012 3:24:51 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:50:00 AM

Lab ID: 1208B42-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/28/2012 8:45:57 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 8:45:57 AM
Surr: DNOP	137	79.5-166		%REC	1	8/28/2012 8:45:57 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/30/2012 11:02:34 PM
Surr: BFB	90.6	69.8-119		%REC	1	8/30/2012 11:02:34 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.67	0.10		mg/L	1	8/27/2012 11:39:07 PM
Chloride	49	10		mg/L	20	8/27/2012 11:51:32 PM
Bromide	ND	0.10		mg/L	1	8/27/2012 11:39:07 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/27/2012 11:39:07 PM
Sulfate	150	10		mg/L	20	8/27/2012 11:51:32 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/28/2012 10:02:31 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.018	0.0020		mg/L	1	9/13/2012 11:54:14 AM
Cadmium	ND	0.0020		mg/L	1	9/13/2012 11:54:14 AM
Calcium	1.4	1.0		mg/L	1	9/13/2012 11:54:14 AM
Chromium	ND	0.0060		mg/L	1	9/13/2012 11:54:14 AM
Copper	ND	0.0060		mg/L	1	9/13/2012 11:54:14 AM
Iron	ND	0.020		mg/L	1	9/13/2012 11:54:14 AM
Lead	ND	0.0050		mg/L	1	9/13/2012 11:54:14 AM
Magnesium	ND	1.0		mg/L	1	9/13/2012 11:54:14 AM
Manganese	0.0030	0.0020		mg/L	1	9/13/2012 11:54:14 AM
Potassium	ND	1.0		mg/L	1	9/13/2012 11:54:14 AM
Silver	ND	0.0050		mg/L	1	9/13/2012 11:54:14 AM
Sodium	270	5.0		mg/L	5	9/13/2012 12:10:15 PM
Zinc	0.019	0.010		mg/L	1	9/13/2012 11:54:14 AM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.021	0.0020		mg/L	1	9/11/2012 12:30:07 PM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 12:30:07 PM
Chromium	ND	0.0060		mg/L	1	9/11/2012 12:30:07 PM
Copper	ND	0.0060		mg/L	1	9/11/2012 12:30:07 PM
Iron	0.022	0.020		mg/L	1	9/11/2012 12:30:07 PM
Lead	ND	0.0050		mg/L	1	9/11/2012 12:30:07 PM
Manganese	0.0072	0.0020		mg/L	1	9/11/2012 12:30:07 PM
Silver	ND	0.0050		mg/L	1	9/11/2012 12:30:07 PM
Zinc	ND	0.010		mg/L	1	9/11/2012 12:30:07 PM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	ND	0.0010		mg/L	1	9/11/2012 1:07:59 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:50:00 AM

Lab ID: 1208B42-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Selenium	ND	0.0010		mg/L	1	9/11/2012 1:07:59 PM
Uranium	0.0090	0.0010		mg/L	1	9/11/2012 1:07:59 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 6:25:00 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:25:00 PM
Uranium	0.0097	0.0025		mg/L	2.5	9/13/2012 2:00:11 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:25:05 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Acenaphthylene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Aniline	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Anthracene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Azobenzene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Benz(a)anthracene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Benzoic acid	ND	20		µg/L	1	8/28/2012 7:22:18 PM
Benzyl alcohol	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/28/2012 7:22:18 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Carbazole	ND	10		µg/L	1	8/28/2012 7:22:18 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/28/2012 7:22:18 PM
4-Chloroaniline	ND	10		µg/L	1	8/28/2012 7:22:18 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
2-Chlorophenol	ND	10		µg/L	1	8/28/2012 7:22:18 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Chrysene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Dibenzofuran	ND	10		µg/L	1	8/28/2012 7:22:18 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 7:22:18 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:50:00 AM

Lab ID: 1208B42-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Diethyl phthalate	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Dimethyl phthalate	ND	10		µg/L	1	8/28/2012 7:22:18 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/28/2012 7:22:18 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/28/2012 7:22:18 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/28/2012 7:22:18 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/28/2012 7:22:18 PM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Fluoranthene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Fluorene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Hexachlorobenzene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Hexachloroethane	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Isophorone	ND	10		µg/L	1	8/28/2012 7:22:18 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
2-Methylphenol	ND	10		µg/L	1	8/28/2012 7:22:18 PM
3+4-Methylphenol	ND	10		µg/L	1	8/28/2012 7:22:18 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/28/2012 7:22:18 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/28/2012 7:22:18 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Naphthalene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
2-Nitroaniline	ND	10		µg/L	1	8/28/2012 7:22:18 PM
3-Nitroaniline	ND	10		µg/L	1	8/28/2012 7:22:18 PM
4-Nitroaniline	ND	20		µg/L	1	8/28/2012 7:22:18 PM
Nitrobenzene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
2-Nitrophenol	ND	10		µg/L	1	8/28/2012 7:22:18 PM
4-Nitrophenol	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Pentachlorophenol	ND	20		µg/L	1	8/28/2012 7:22:18 PM
Phenanthrene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Phenol	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Pyrene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Pyridine	ND	10		µg/L	1	8/28/2012 7:22:18 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/28/2012 7:22:18 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/28/2012 7:22:18 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/28/2012 7:22:18 PM
Surr: 2,4,6-Tribromophenol	77.8	44.2-126		%REC	1	8/28/2012 7:22:18 PM
Surr: 2-Fluorobiphenyl	64.9	37-114		%REC	1	8/28/2012 7:22:18 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:50:00 AM

Lab ID: 1208B42-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorophenol	46.5	23.4-98		%REC	1	8/28/2012 7:22:18 PM
Surr: 4-Terphenyl-d14	62.1	41.3-116		%REC	1	8/28/2012 7:22:18 PM
Surr: Nitrobenzene-d5	74.8	39.5-118		%REC	1	8/28/2012 7:22:18 PM
Surr: Phenol-d5	43.2	20.9-95.9		%REC	1	8/28/2012 7:22:18 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Toluene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Ethylbenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Naphthalene	ND	2.0		µg/L	1	9/1/2012 3:52:29 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 3:52:29 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 3:52:29 AM
Acetone	ND	10		µg/L	1	9/1/2012 3:52:29 AM
Bromobenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Bromoform	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Bromomethane	ND	3.0		µg/L	1	9/1/2012 3:52:29 AM
2-Butanone	ND	10		µg/L	1	9/1/2012 3:52:29 AM
Carbon disulfide	ND	10		µg/L	1	9/1/2012 3:52:29 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Chlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Chloroethane	ND	2.0		µg/L	1	9/1/2012 3:52:29 AM
Chloroform	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Chloromethane	ND	3.0		µg/L	1	9/1/2012 3:52:29 AM
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2012 3:52:29 AM
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Dibromomethane	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 10:50:00 AM

Lab ID: 1208B42-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2012 3:52:29 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
2-Hexanone	ND	10		µg/L	1	9/1/2012 3:52:29 AM
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2012 3:52:29 AM
Methylene Chloride	ND	3.0		µg/L	1	9/1/2012 3:52:29 AM
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2012 3:52:29 AM
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Styrene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2012 3:52:29 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2012 3:52:29 AM
Vinyl chloride	ND	1.0		µg/L	1	9/1/2012 3:52:29 AM
Xylenes, Total	ND	1.5		µg/L	1	9/1/2012 3:52:29 AM
Surr: 1,2-Dichloroethane-d4	82.2	70-130		%REC	1	9/1/2012 3:52:29 AM
Surr: 4-Bromofluorobenzene	89.5	70-130		%REC	1	9/1/2012 3:52:29 AM
Surr: Dibromofluoromethane	81.4	70-130		%REC	1	9/1/2012 3:52:29 AM
Surr: Toluene-d8	83.8	70-130		%REC	1	9/1/2012 3:52:29 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 8:30:00 PM

Lab ID: 1208B42-003

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/28/2012 9:07:30 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 9:07:30 AM
Surr: DNOP	139	79.5-166		%REC	1	8/28/2012 9:07:30 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/30/2012 11:32:48 PM
Surr: BFB	100	69.8-119		%REC	1	8/30/2012 11:32:48 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.29	0.10		mg/L	1	8/28/2012 12:03:57 AM
Chloride	16	10		mg/L	20	8/28/2012 12:16:22 AM
Bromide	0.11	0.10		mg/L	1	8/28/2012 12:03:57 AM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/28/2012 12:03:57 AM
Sulfate	140	10		mg/L	20	8/28/2012 12:16:22 AM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/28/2012 10:52:11 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.019	0.0020		mg/L	1	9/13/2012 12:13:51 PM
Cadmium	ND	0.0020		mg/L	1	9/13/2012 12:13:51 PM
Calcium	1.8	1.0		mg/L	1	9/13/2012 12:13:51 PM
Chromium	ND	0.0060		mg/L	1	9/13/2012 12:13:51 PM
Copper	ND	0.0060		mg/L	1	9/13/2012 12:13:51 PM
Iron	ND	0.020		mg/L	1	9/13/2012 12:13:51 PM
Lead	ND	0.0050		mg/L	1	9/13/2012 12:13:51 PM
Magnesium	ND	1.0		mg/L	1	9/13/2012 12:13:51 PM
Manganese	0.0031	0.0020		mg/L	1	9/13/2012 12:13:51 PM
Potassium	ND	1.0		mg/L	1	9/13/2012 12:13:51 PM
Silver	ND	0.0050		mg/L	1	9/13/2012 12:13:51 PM
Sodium	290	5.0		mg/L	5	9/13/2012 12:17:50 PM
Zinc	0.033	0.010		mg/L	1	9/13/2012 12:13:51 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.020	0.0020		mg/L	1	9/11/2012 12:33:48 PM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 12:33:48 PM
Chromium	ND	0.0060		mg/L	1	9/11/2012 12:33:48 PM
Copper	ND	0.0060		mg/L	1	9/11/2012 12:33:48 PM
Iron	ND	0.020		mg/L	1	9/11/2012 12:33:48 PM
Lead	ND	0.0050		mg/L	1	9/11/2012 12:33:48 PM
Manganese	0.0034	0.0020		mg/L	1	9/11/2012 12:33:48 PM
Silver	ND	0.0050		mg/L	1	9/11/2012 12:33:48 PM
Zinc	ND	0.010		mg/L	1	9/11/2012 12:33:48 PM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	ND	0.0010		mg/L	1	9/11/2012 1:11:55 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 8:30:00 PM

Lab ID: 1208B42-003

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Selenium	ND	0.0010		mg/L	1	9/11/2012 1:11:55 PM
Uranium	0.016	0.0010		mg/L	1	9/11/2012 1:11:55 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 6:30:39 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:30:39 PM
Uranium	0.018	0.0025		mg/L	2.5	9/13/2012 2:05:50 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:26:50 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Acenaphthylene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Aniline	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Anthracene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Azobenzene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Benz(a)anthracene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Benzoic acid	ND	20		µg/L	1	8/28/2012 7:52:14 PM
Benzyl alcohol	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/28/2012 7:52:14 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Carbazole	ND	10		µg/L	1	8/28/2012 7:52:14 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/28/2012 7:52:14 PM
4-Chloroaniline	ND	10		µg/L	1	8/28/2012 7:52:14 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
2-Chlorophenol	ND	10		µg/L	1	8/28/2012 7:52:14 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Chrysene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Dibenzofuran	ND	10		µg/L	1	8/28/2012 7:52:14 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 7:52:14 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 8:30:00 PM

Lab ID: 1208B42-003

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Diethyl phthalate	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Dimethyl phthalate	ND	10		µg/L	1	8/28/2012 7:52:14 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/28/2012 7:52:14 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/28/2012 7:52:14 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/28/2012 7:52:14 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/28/2012 7:52:14 PM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Fluoranthene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Fluorene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Hexachlorobenzene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Hexachloroethane	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Isophorone	ND	10		µg/L	1	8/28/2012 7:52:14 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
2-Methylphenol	ND	10		µg/L	1	8/28/2012 7:52:14 PM
3+4-Methylphenol	ND	10		µg/L	1	8/28/2012 7:52:14 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/28/2012 7:52:14 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/28/2012 7:52:14 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Naphthalene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
2-Nitroaniline	ND	10		µg/L	1	8/28/2012 7:52:14 PM
3-Nitroaniline	ND	10		µg/L	1	8/28/2012 7:52:14 PM
4-Nitroaniline	ND	20		µg/L	1	8/28/2012 7:52:14 PM
Nitrobenzene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
2-Nitrophenol	ND	10		µg/L	1	8/28/2012 7:52:14 PM
4-Nitrophenol	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Pentachlorophenol	ND	20		µg/L	1	8/28/2012 7:52:14 PM
Phenanthrene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Phenol	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Pyrene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Pyridine	ND	10		µg/L	1	8/28/2012 7:52:14 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/28/2012 7:52:14 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/28/2012 7:52:14 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/28/2012 7:52:14 PM
Surr: 2,4,6-Tribromophenol	75.1	44.2-126		%REC	1	8/28/2012 7:52:14 PM
Surr: 2-Fluorobiphenyl	61.3	37-114		%REC	1	8/28/2012 7:52:14 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-4

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 8:30:00 PM

Lab ID: 1208B42-003

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorophenol	45.5	23.4-98		%REC	1	8/28/2012 7:52:14 PM
Surr: 4-Terphenyl-d14	58.1	41.3-116		%REC	1	8/28/2012 7:52:14 PM
Surr: Nitrobenzene-d5	66.8	39.5-118		%REC	1	8/28/2012 7:52:14 PM
Surr: Phenol-d5	42.0	20.9-95.9		%REC	1	8/28/2012 7:52:14 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Toluene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Ethylbenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Naphthalene	ND	2.0		µg/L	1	9/1/2012 4:20:16 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 4:20:16 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 4:20:16 AM
Acetone	ND	10		µg/L	1	9/1/2012 4:20:16 AM
Bromobenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Bromoform	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Bromomethane	ND	3.0		µg/L	1	9/1/2012 4:20:16 AM
2-Butanone	ND	10		µg/L	1	9/1/2012 4:20:16 AM
Carbon disulfide	ND	10		µg/L	1	9/1/2012 4:20:16 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Chlorobenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Chloroethane	ND	2.0		µg/L	1	9/1/2012 4:20:16 AM
Chloroform	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Chloromethane	ND	3.0		µg/L	1	9/1/2012 4:20:16 AM
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2012 4:20:16 AM
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Dibromomethane	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** MW-4**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/21/2012 8:30:00 PM**Lab ID:** 1208B42-003**Matrix:** AQUEOUS**Received Date:** 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2012 4:20:16 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
2-Hexanone	ND	10		µg/L	1	9/1/2012 4:20:16 AM
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2012 4:20:16 AM
Methylene Chloride	ND	3.0		µg/L	1	9/1/2012 4:20:16 AM
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2012 4:20:16 AM
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Styrene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2012 4:20:16 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2012 4:20:16 AM
Vinyl chloride	ND	1.0		µg/L	1	9/1/2012 4:20:16 AM
Xylenes, Total	ND	1.5		µg/L	1	9/1/2012 4:20:16 AM
Surr: 1,2-Dichloroethane-d4	82.8	70-130		%REC	1	9/1/2012 4:20:16 AM
Surr: 4-Bromofluorobenzene	89.8	70-130		%REC	1	9/1/2012 4:20:16 AM
Surr: Dibromofluoromethane	81.3	70-130		%REC	1	9/1/2012 4:20:16 AM
Surr: Toluene-d8	83.4	70-130		%REC	1	9/1/2012 4:20:16 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 8:05:00 AM

Lab ID: 1208B42-004

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/28/2012 9:29:12 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 9:29:12 AM
Surr: DNOP	138	79.5-166		%REC	1	8/28/2012 9:29:12 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/31/2012 12:02:55 AM
Surr: BFB	103	69.8-119		%REC	1	8/31/2012 12:02:55 AM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.67	0.10		mg/L	1	8/28/2012 12:28:47 AM
Chloride	55	10		mg/L	20	8/28/2012 12:41:12 AM
Bromide	ND	0.10		mg/L	1	8/28/2012 12:28:47 AM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/28/2012 12:28:47 AM
Sulfate	160	10		mg/L	20	8/28/2012 12:41:12 AM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/28/2012 11:04:36 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.016	0.0020		mg/L	1	9/13/2012 12:21:32 PM
Cadmium	ND	0.0020		mg/L	1	9/13/2012 12:21:32 PM
Calcium	1.4	1.0		mg/L	1	9/13/2012 12:21:32 PM
Chromium	ND	0.0060		mg/L	1	9/13/2012 12:21:32 PM
Copper	ND	0.0060		mg/L	1	9/13/2012 12:21:32 PM
Iron	ND	0.020		mg/L	1	9/13/2012 12:21:32 PM
Lead	ND	0.0050		mg/L	1	9/13/2012 12:21:32 PM
Magnesium	ND	1.0		mg/L	1	9/13/2012 12:21:32 PM
Manganese	0.0029	0.0020		mg/L	1	9/13/2012 12:21:32 PM
Potassium	ND	1.0		mg/L	1	9/13/2012 12:21:32 PM
Silver	ND	0.0050		mg/L	1	9/13/2012 12:21:32 PM
Sodium	270	5.0		mg/L	5	9/13/2012 12:27:09 PM
Zinc	ND	0.010		mg/L	1	9/13/2012 12:21:32 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.026	0.0020		mg/L	1	9/11/2012 12:37:30 PM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 12:37:30 PM
Chromium	ND	0.0060		mg/L	1	9/11/2012 12:37:30 PM
Copper	ND	0.0060		mg/L	1	9/11/2012 12:37:30 PM
Iron	ND	0.020		mg/L	1	9/11/2012 12:37:30 PM
Lead	ND	0.0050		mg/L	1	9/11/2012 12:37:30 PM
Manganese	0.012	0.0020		mg/L	1	9/11/2012 12:37:30 PM
Silver	ND	0.0050		mg/L	1	9/11/2012 12:37:30 PM
Zinc	ND	0.010		mg/L	1	9/11/2012 12:37:30 PM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	ND	0.0010		mg/L	1	9/11/2012 1:15:51 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 8:05:00 AM

Lab ID: 1208B42-004

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Selenium	ND	0.0010		mg/L	1	9/11/2012 1:15:51 PM
Uranium	0.0091	0.0010		mg/L	1	9/11/2012 1:15:51 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 6:32:31 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:32:31 PM
Uranium	0.0095	0.0025		mg/L	2.5	9/13/2012 2:07:42 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:32:11 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Acenaphthylene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Aniline	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Anthracene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Azobenzene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Benz(a)anthracene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Benzoic acid	ND	20		µg/L	1	8/28/2012 8:22:09 PM
Benzyl alcohol	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/28/2012 8:22:09 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Carbazole	ND	10		µg/L	1	8/28/2012 8:22:09 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/28/2012 8:22:09 PM
4-Chloroaniline	ND	10		µg/L	1	8/28/2012 8:22:09 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
2-Chlorophenol	ND	10		µg/L	1	8/28/2012 8:22:09 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Chrysene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Dibenzofuran	ND	10		µg/L	1	8/28/2012 8:22:09 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 8:22:09 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 8:05:00 AM

Lab ID: 1208B42-004

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Diethyl phthalate	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Dimethyl phthalate	ND	10		µg/L	1	8/28/2012 8:22:09 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/28/2012 8:22:09 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/28/2012 8:22:09 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/28/2012 8:22:09 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/28/2012 8:22:09 PM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Fluoranthene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Fluorene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Hexachlorobenzene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Hexachloroethane	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Isophorone	ND	10		µg/L	1	8/28/2012 8:22:09 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
2-Methylphenol	ND	10		µg/L	1	8/28/2012 8:22:09 PM
3+4-Methylphenol	ND	10		µg/L	1	8/28/2012 8:22:09 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/28/2012 8:22:09 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/28/2012 8:22:09 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Naphthalene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
2-Nitroaniline	ND	10		µg/L	1	8/28/2012 8:22:09 PM
3-Nitroaniline	ND	10		µg/L	1	8/28/2012 8:22:09 PM
4-Nitroaniline	ND	20		µg/L	1	8/28/2012 8:22:09 PM
Nitrobenzene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
2-Nitrophenol	ND	10		µg/L	1	8/28/2012 8:22:09 PM
4-Nitrophenol	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Pentachlorophenol	ND	20		µg/L	1	8/28/2012 8:22:09 PM
Phenanthrene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Phenol	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Pyrene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Pyridine	ND	10		µg/L	1	8/28/2012 8:22:09 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/28/2012 8:22:09 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/28/2012 8:22:09 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/28/2012 8:22:09 PM
Surr: 2,4,6-Tribromophenol	81.6	44.2-126		%REC	1	8/28/2012 8:22:09 PM
Surr: 2-Fluorobiphenyl	66.0	37-114		%REC	1	8/28/2012 8:22:09 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 8:05:00 AM

Lab ID: 1208B42-004

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorophenol	41.7	23.4-98		%REC	1	8/28/2012 8:22:09 PM
Surr: 4-Terphenyl-d14	65.4	41.3-116		%REC	1	8/28/2012 8:22:09 PM
Surr: Nitrobenzene-d5	63.6	39.5-118		%REC	1	8/28/2012 8:22:09 PM
Surr: Phenol-d5	38.4	20.9-95.9		%REC	1	8/28/2012 8:22:09 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Toluene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Ethylbenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Naphthalene	ND	2.0		µg/L	1	9/1/2012 5:43:23 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 5:43:23 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 5:43:23 AM
Acetone	ND	10		µg/L	1	9/1/2012 5:43:23 AM
Bromobenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Bromoform	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Bromomethane	ND	3.0		µg/L	1	9/1/2012 5:43:23 AM
2-Butanone	ND	10		µg/L	1	9/1/2012 5:43:23 AM
Carbon disulfide	ND	10		µg/L	1	9/1/2012 5:43:23 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Chlorobenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Chloroethane	ND	2.0		µg/L	1	9/1/2012 5:43:23 AM
Chloroform	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Chloromethane	ND	3.0		µg/L	1	9/1/2012 5:43:23 AM
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2012 5:43:23 AM
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Dibromomethane	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: MW-5

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 8:05:00 AM

Lab ID: 1208B42-004

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2012 5:43:23 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
2-Hexanone	ND	10		µg/L	1	9/1/2012 5:43:23 AM
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2012 5:43:23 AM
Methylene Chloride	ND	3.0		µg/L	1	9/1/2012 5:43:23 AM
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2012 5:43:23 AM
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Styrene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2012 5:43:23 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2012 5:43:23 AM
Vinyl chloride	ND	1.0		µg/L	1	9/1/2012 5:43:23 AM
Xylenes, Total	ND	1.5		µg/L	1	9/1/2012 5:43:23 AM
Surr: 1,2-Dichloroethane-d4	84.4	70-130		%REC	1	9/1/2012 5:43:23 AM
Surr: 4-Bromofluorobenzene	89.2	70-130		%REC	1	9/1/2012 5:43:23 AM
Surr: Dibromofluoromethane	90.0	70-130		%REC	1	9/1/2012 5:43:23 AM
Surr: Toluene-d8	82.8	70-130		%REC	1	9/1/2012 5:43:23 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 11:30:00 AM

Lab ID: 1208B42-005

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Toluene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Ethylbenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Naphthalene	ND	2.0		µg/L	1	9/1/2012 6:10:59 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 6:10:59 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 6:10:59 AM
Acetone	ND	10		µg/L	1	9/1/2012 6:10:59 AM
Bromobenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Bromoform	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Bromomethane	ND	3.0		µg/L	1	9/1/2012 6:10:59 AM
2-Butanone	ND	10		µg/L	1	9/1/2012 6:10:59 AM
Carbon disulfide	ND	10		µg/L	1	9/1/2012 6:10:59 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Chlorobenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Chloroethane	ND	2.0		µg/L	1	9/1/2012 6:10:59 AM
Chloroform	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Chloromethane	ND	3.0		µg/L	1	9/1/2012 6:10:59 AM
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2012 6:10:59 AM
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Dibromomethane	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2012 6:10:59 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
2-Hexanone	ND	10		µg/L	1	9/1/2012 6:10:59 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B42

Date Reported: 9/25/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 11:30:00 AM

Lab ID: 1208B42-005

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2012 6:10:59 AM
Methylene Chloride	ND	3.0		µg/L	1	9/1/2012 6:10:59 AM
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2012 6:10:59 AM
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Styrene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2012 6:10:59 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2012 6:10:59 AM
Vinyl chloride	ND	1.0		µg/L	1	9/1/2012 6:10:59 AM
Xylenes, Total	ND	1.5		µg/L	1	9/1/2012 6:10:59 AM
Surr: 1,2-Dichloroethane-d4	85.7	70-130		%REC	1	9/1/2012 6:10:59 AM
Surr: 4-Bromofluorobenzene	84.2	70-130		%REC	1	9/1/2012 6:10:59 AM
Surr: Dibromofluoromethane	88.3	70-130		%REC	1	9/1/2012 6:10:59 AM
Surr: Toluene-d8	85.5	70-130		%REC	1	9/1/2012 6:10:59 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3584		SampType:	MBLK		TestCode:	EPA Method 200.7: Metals			
Client ID:	PBW		Batch ID:	3584		RunNo:	5311			
Prep Date:	9/4/2012		Analysis Date:	9/5/2012		SeqNo:	151260		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								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID	LCS-3584		SampType:	LCS		TestCode:	EPA Method 200.7: Metals			
Client ID:	LCSW		Batch ID:	3584		RunNo:	5311			
Prep Date:	9/4/2012		Analysis Date:	9/5/2012		SeqNo:	151261		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	0.52	0.0020	0.5000	0	103	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Lead	0.50	0.0050	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID	MB		SampType:	MBLK		TestCode:	EPA Method 200.7: Metals			
Client ID:	PBW		Batch ID:	R5512		RunNo:	5512			
Prep Date:			Analysis Date:	9/13/2012		SeqNo:	157472		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								
Lead	ND	0.0050								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Zinc	ND	0.010								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType: LCS			TestCode: EPA Method 200.7: Metals				
Client ID:	LCSW		Batch ID: R5512			RunNo: 5512				
Prep Date:			Analysis Date: 9/13/2012			SeqNo: 157473		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	99.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Calcium	51	1.0	50.00	0	101	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.50	0.0060	0.5000	0	99.2	85	115			
Iron	0.49	0.020	0.5000	0	97.3	85	115			
Lead	0.49	0.0050	0.5000	0	98.8	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Manganese	0.49	0.0020	0.5000	0	97.4	85	115			
Potassium	49	1.0	50.00	0	98.7	85	115			
Silver	0.098	0.0050	0.1000	0	97.5	85	115			
Sodium	50	1.0	50.00	0	101	85	115			
Zinc	0.49	0.010	0.5000	0	97.5	85	115			

Sample ID	1209244-001AMS		SampType: MS			TestCode: EPA Method 200.7: Metals				
Client ID:	BatchQC		Batch ID: R5512			RunNo: 5512				
Prep Date:			Analysis Date: 9/13/2012			SeqNo: 157480		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	98.4	70	130			

Sample ID	1209244-001AMSD		SampType: MSD			TestCode: EPA Method 200.7: Metals				
Client ID:	BatchQC		Batch ID: R5512			RunNo: 5512				
Prep Date:			Analysis Date: 9/13/2012			SeqNo: 157481		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.51	0.0020	0.5000	0	101	70	130	2.75	20	

Modifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208C13-006AMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5512		RunNo:	5512			
Prep Date:			Analysis Date:	9/13/2012		SeqNo:	157513		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0.01006	89.5	70	130			
Cadmium	0.47	0.0020	0.5000	0	94.8	70	130			
Chromium	0.44	0.0060	0.5000	0	87.1	70	130			
Copper	0.47	0.0060	0.5000	0	93.1	70	130			
Iron	0.45	0.020	0.5000	0.002770	89.7	70	130			
Magnesium	72	1.0	50.00	23.53	97.2	70	130			
Manganese	0.46	0.0020	0.5000	0.01938	89.1	70	130			
Potassium	50	1.0	50.00	1.500	97.0	70	130			
Silver	0.095	0.0050	0.1000	0	94.8	70	130			
Sodium	61	1.0	50.00	10.91	99.6	70	130			
Zinc	0.54	0.010	0.5000	0.1251	82.3	70	130			

Sample ID	1208C13-006AMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5512		RunNo:	5512			
Prep Date:			Analysis Date:	9/13/2012		SeqNo:	157514		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.01006	96.8	70	130	7.72	20	
Cadmium	0.50	0.0020	0.5000	0	100	70	130	5.84	20	
Chromium	0.46	0.0060	0.5000	0	92.3	70	130	5.78	20	
Copper	0.50	0.0060	0.5000	0	101	70	130	7.90	20	
Iron	0.47	0.020	0.5000	0.002770	94.4	70	130	5.07	20	
Magnesium	73	1.0	50.00	23.53	99.3	70	130	1.49	20	
Manganese	0.50	0.0020	0.5000	0.01938	96.0	70	130	7.15	20	
Potassium	51	1.0	50.00	1.500	99.6	70	130	2.62	20	
Silver	0.10	0.0050	0.1000	0	103	70	130	8.54	20	
Sodium	62	1.0	50.00	10.91	102	70	130	1.97	20	
Zinc	0.56	0.010	0.5000	0.1251	87.0	70	130	4.25	20	

Sample ID	1208C13-006AMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5512		RunNo:	5512			
Prep Date:			Analysis Date:	9/13/2012		SeqNo:	157516		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	340	5.0	250.0	91.96	99.6	70	130			

Sample ID	1208C13-006AMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5512		RunNo:	5512			
Prep Date:			Analysis Date:	9/13/2012		SeqNo:	157517		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	370	5.0	250.0	91.96	112	70	130	8.36	20	

Qualifiers:

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

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157572	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								
Lead	ND	0.0050								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157573	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	96.3	85	115			
Cadmium	0.50	0.0020	0.5000	0.0004200	100	85	115			
Calcium	48	1.0	50.00	0.02685	95.5	85	115			
Chromium	0.48	0.0060	0.5000	0	95.2	85	115			
Copper	0.50	0.0060	0.5000	0	99.9	85	115			
Iron	0.47	0.020	0.5000	0	93.2	85	115			
Lead	0.49	0.0050	0.5000	0	97.5	85	115			
Magnesium	51	1.0	50.00	0.02779	103	85	115			
Manganese	0.48	0.0020	0.5000	0	95.4	85	115			
Potassium	50	1.0	50.00	0	100	85	115			
Silver	0.10	0.0050	0.1000	0	103	85	115			
Sodium	52	1.0	50.00	0.04813	104	85	115			

Sample ID	1208C82-001CMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157592	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0.01033	95.1	70	130			
Manganese	0.57	0.0020	0.5000	0.08803	96.2	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208C82-001CMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157593	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.47	0.020	0.5000	0.01033	92.9	70	130	2.34	20	
Manganese	0.56	0.0020	0.5000	0.08803	93.7	70	130	2.16	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157633	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								
Lead	ND	0.0050								
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:	R5512	RunNo:	5512					
Prep Date:		Analysis Date:	9/13/2012	SeqNo:	157634	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	99.0	85	115			
Cadmium	0.50	0.0020	0.5000	0	100	85	115			
Calcium	51	1.0	50.00	0	101	85	115			
Chromium	0.49	0.0060	0.5000	0	98.7	85	115			
Copper	0.50	0.0060	0.5000	0	99.2	85	115			
Iron	0.49	0.020	0.5000	0	97.3	85	115			
Lead	0.49	0.0050	0.5000	0	98.8	85	115			
Magnesium	51	1.0	50.00	0.02196	102	85	115			
Manganese	0.49	0.0020	0.5000	0	97.4	85	115			
Potassium	49	1.0	50.00	0	98.7	85	115			
Silver	0.098	0.0050	0.1000	0	97.5	85	115			
Sodium	50	1.0	50.00	0	101	85	115			
Zinc	0.49	0.010	0.5000	0	97.5	85	115			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B42

all Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3584		SampType: MBLK		TestCode: EPA Method 200.7: Total Metals					
Client ID:	PBW		Batch ID: 3584		RunNo: 5311					
Prep Date:	9/4/2012		Analysis Date: 9/5/2012		SeqNo: 151199		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								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID	LCS-3584		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 3584		RunNo: 5311					
Prep Date:	9/4/2012		Analysis Date: 9/5/2012		SeqNo: 151200		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	0.52	0.0020	0.5000	0	103	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Lead	0.50	0.0050	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID	MB-3584		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals				
Client ID:	PBW		Batch ID:	3584		RunNo:	5435				
Prep Date:	9/4/2012		Analysis Date:	9/11/2012		SeqNo:	155086		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Silver	ND	0.0050									

Sample ID	LCS-3584		SampType: LCS		TestCode: EPA Method 200.7: Total Metals					
Client ID:	LCSW		Batch ID: 3584		RunNo: 5435					
Prep Date:	9/4/2012		Analysis Date: 9/11/2012		SeqNo: 155087		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	96.4	85	115			

Sample ID	1208B37-002DMS		SampType:	MS		TestCode:	EPA Method 200.7: Total Metals				
Client ID:	BatchQC		Batch ID:	3584		RunNo:	5435				
Prep Date:	9/4/2012		Analysis Date:	9/11/2012		SeqNo:	155140		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B37-002DMS	SampType:	MS	TestCode: EPA Method 200.7: Total Metals						
Client ID:	BatchQC	Batch ID:	3584	RunNo: 5435						
Prep Date:	9/4/2012	Analysis Date:	9/11/2012	SeqNo: 155140		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	100	70	130			
Chromium	0.47	0.0060	0.5000	0	93.5	70	130			
Copper	0.56	0.0060	0.5000	0	111	70	130			
Lead	0.48	0.0050	0.5000	0.003250	94.7	70	130			
Silver	0.024	0.0050	0.1000	0	24.1	70	130			S
Zinc	0.46	0.010	0.5000	0.001840	91.9	70	130			

Sample ID	1208B37-002DMSD		SampType: MSD		TestCode: EPA Method 200.7: Total Metals					
Client ID:	BatchQC		Batch ID: 3584		RunNo: 5435					
Prep Date:	9/4/2012		Analysis Date: 9/11/2012		SeqNo: 155141		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	99.1	70	130	1.07	20	
Chromium	0.46	0.0060	0.5000	0	92.4	70	130	1.20	20	
Copper	0.56	0.0060	0.5000	0	111	70	130	0.121	20	
Lead	0.48	0.0050	0.5000	0.003250	94.4	70	130	0.332	20	
Silver	0.025	0.0050	0.1000	0	25.1	70	130	3.78	20	S
Zinc	0.45	0.010	0.5000	0.001840	90.3	70	130	1.70	20	

Sample ID	1208B37-002DMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	BatchQC	Batch ID:	3584	RunNo:	5435					
Prep Date:	9/4/2012	Analysis Date:	9/11/2012	SeqNo:	155164	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	1.6	0.010	0.5000	1.180	87.6	70	130			

Sample ID	1208B37-002DMSD			SampType:	MSD		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	BatchQC		Batch ID:	3584		RunNo:	5435				
Prep Date:	9/4/2012		Analysis Date:	9/11/2012		SeqNo:	155165		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Barium	1.6	0.010	0.5000	1.180	87.1	70	130	0.155	20		

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B42

Full Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Metals					
Client ID:	LCSW		Batch ID: R5425		RunNo: 5425					
Prep Date:			Analysis Date: 9/11/2012		SeqNo: 154891		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	102	85	115			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Metals					
Client ID:	PBW	Batch ID:	R5425	RunNo:	5425					
Prep Date:		Analysis Date:	9/11/2012	SeqNo:	154893	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	1208932-004AMS		SampType:	MS		TestCode:	EPA 200.8: Metals				
Client ID:	BatchQC		Batch ID:	R5425		RunNo:	5425				
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155236		Units: mg/L		
lyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.030	0.0010	0.02500	0.005874	96.1	70	130				
Selenium	0.026	0.0010	0.02500	0.002644	93.5	70	130				

Sample ID	1208C61-004AMS		SampType:	MS		TestCode:	EPA 200.8: Metals				
Client ID:	BatchQC		Batch ID:	R5425		RunNo:	5425				
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155243		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.026	0.0010	0.02500	0.001791	98.5	70	130				
Selenium	0.027	0.0010	0.02500	0.002323	100	70	130				

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Metals					
Client ID:	LCSW		Batch ID: R5425		RunNo: 5425					
Prep Date:			Analysis Date: 9/11/2012		SeqNo: 155260		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Notes:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Metals						
Client ID:	PBW	Batch ID:	R5425	RunNo:	5425						
Prep Date:		Analysis Date:	9/11/2012	SeqNo:	155261	Units:	mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Selenium		ND	0.0010								
Uranium		ND	0.0010								

Sample ID	MB-3584	SampType:	MBLK	TestCode:	EPA 200.8: Metals						
Client ID:	PBW	Batch ID:	3584	RunNo:	5508						
Prep Date:	9/4/2012	Analysis Date:	9/13/2012	SeqNo:	157391	Units:	mg/L				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		ND	0.0025								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R5425		RunNo: 5425					
Prep Date:			Analysis Date: 9/11/2012		SeqNo: 154883		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	102	85	115			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5425	RunNo:	5425					
Prep Date:		Analysis Date:	9/11/2012	SeqNo:	154885	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	1208C13-004AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5425		RunNo:	5425				
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155231		Units: mg/L		
lyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.026	0.0010	0.02500	0.0002387	103	70	130				
Selenium	0.026	0.0010	0.02500	0.0004619	104	70	130				

Modifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3584	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3584	RunNo:	5392					
Prep Date:	9/4/2012	Analysis Date:	9/6/2012	SeqNo:	153679	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								

Sample ID	MB-3584	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3584	RunNo:	5508					
Prep Date:	9/4/2012	Analysis Date:	9/13/2012	SeqNo:	157424	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0025								

Qualifiers:

* Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH greater than 2

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3705	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156146	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-3705	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156147	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.9	80	120			

Sample ID	1208A83-001BMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156149	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	98.2	75	125			

Sample ID	1208A83-001BMSD	SampType:	MSD	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156150	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	97.7	75	125	0.517	20	

Sample ID	MB-3706	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	3706	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156174	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-3706	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	3706	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156175	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	93.7	80	120			

Sample ID	1208C13-001BMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3706	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156178	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	75	125			

Qualifiers:

- | | |
|--|--|
| Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| Value above quantitation range | H Holding times for preparation or analysis exceeded |
| Analyte detected below quantitation limits | ND Not Detected at the Reporting Limit |
| Sample pH greater than 2 | R RPD outside accepted recovery limits |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208C13-001BMSD			SampType:	MSD		TestCode:	EPA Method 245.1: Mercury			
Client ID:	BatchQC		Batch ID:		3706		RunNo:	5464			
Prep Date:	9/11/2012		Analysis Date:		9/12/2012		SeqNo:	156179		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Mercury	0.0053	0.00020	0.005000	0	105	75	125	3.04	20		

Qualifiers:

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

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R5147	RunNo: 5147								
Prep Date:	Analysis Date: 8/27/2012	SeqNo: 146216 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: R5147	RunNo: 5147								
Prep Date:	Analysis Date: 8/27/2012	SeqNo: 146217 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	93.9	90	110			
Chloride	4.6	0.50	5.000	0	91.9	90	110			
Bromide	2.4	0.10	2.500	0	94.6	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.8	90	110			
Sulfate	9.5	0.50	10.00	0	94.7	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.2	90	110			

Sample ID 1208B32-001CMS	SampType: MS	TestCode: EPA Method 300.0: Anions								
Client ID: BatchQC	Batch ID: R5147	RunNo: 5147								
Prep Date:	Analysis Date: 8/27/2012	SeqNo: 146223 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.65	0.10	0.5000	0.2431	81.8	76.6	110			
Bromide	2.6	0.10	2.500	0.2557	92.0	83.3	107			

Sample ID 1208B32-001CMSD	SampType: MSD	TestCode: EPA Method 300.0: Anions								
Client ID: BatchQC	Batch ID: R5147	RunNo: 5147								
Prep Date:	Analysis Date: 8/27/2012	SeqNo: 146224 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.66	0.10	0.5000	0.2431	83.3	76.6	110	1.12	20	
Bromide	2.6	0.10	2.500	0.2557	91.9	83.3	107	0.110	20	

Sample ID 1208B37-001BMS	SampType: MS	TestCode: EPA Method 300.0: Anions								
Client ID: BatchQC	Batch ID: R5147	RunNo: 5147								
Prep Date:	Analysis Date: 8/27/2012	SeqNo: 146231 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.66	0.10	0.5000	0.2474	83.2	76.6	110			
Bromide	2.6	0.10	2.500	0.3524	91.2	83.3	107			

Flags:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B37-001BMSD		SampType:	MSD		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5147		RunNo:	5147			
Prep Date:			Analysis Date:	8/27/2012		SeqNo:	146232	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.67	0.10	0.5000	0.2474	85.0	76.6	110	1.35	20	
Bromide	2.7	0.10	2.500	0.3524	92.0	83.3	107	0.827	20	

Sample ID	MB		SampType:	MBLK		TestCode:	EPA Method 300.0: Anions			
Client ID:	PBW		Batch ID:	R5147		RunNo:	5147			
Prep Date:			Analysis Date:	8/28/2012		SeqNo:	146268	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS		SampType:	LCS		TestCode:	EPA Method 300.0: Anions			
Client ID:	LCSW		Batch ID:	R5147		RunNo:	5147			
Prep Date:			Analysis Date:	8/28/2012		SeqNo:	146269	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	94.3	90	110			
Bromide	2.4	0.10	2.500	0	96.0	90	110			
Phosphorus, Orthophosphate (As P)	5.0	0.50	5.000	0	100	90	110			
Sulfate	9.6	0.50	10.00	0	95.7	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.2	90	110			

Sample ID	1208B33-006CMS		SampType:	MS		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5147		RunNo:	5147			
Prep Date:			Analysis Date:	8/28/2012		SeqNo:	146277	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.10	0.5000	1.140	79.8	76.6	110			
Bromide	2.4	0.10	2.500	0.1141	90.6	83.3	107			

Sample ID	1208B33-006CMSD		SampType:	MSD		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5147		RunNo:	5147			
Prep Date:			Analysis Date:	8/28/2012		SeqNo:	146278	Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.6	0.10	0.5000	1.140	83.5	76.6	110	1.20	20	
Bromide	2.4	0.10	2.500	0.1141	92.8	83.3	107	2.23	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B42

all Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3489	SampType:	MBLK	TestCode:	EPA Method 8015B: Diesel Range					
Client ID:	PBW	Batch ID:	3489	RunNo:	5106					
Prep Date:	8/27/2012	Analysis Date:	8/27/2012	SeqNo:	145462	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	1.0								
Motor Oil Range Organics (MRO)	ND	5.0								
Surr: DNOP	1.2		1.000		118	79.5	166			

Sample ID	LCS-3489	SampType:	LCS	TestCode:	EPA Method 8015B: Diesel Range					
Client ID:	LCSSW	Batch ID:	3489	RunNo:	5106					
Prep Date:	8/27/2012	Analysis Date:	8/27/2012	SeqNo:	145463	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.0	1.0	5.000	0	80.2	74	157			
Surr: DNOP	0.51		0.5000		101	79.5	166			

Sample ID	LCSD-3489	SampType:	LCSD	TestCode:	EPA Method 8015B: Diesel Range					
Client ID:	LCSS02	Batch ID:	3489	RunNo:	5106					
Prep Date:	8/27/2012	Analysis Date:	8/27/2012	SeqNo:	145464	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.2	1.0	5.000	0	84.5	74	157	5.19	23	
Surr: DNOP	0.52		0.5000		104	79.5	166	0	0	

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208C49-001ADUP	SampType:	DUP	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R5237	RunNo:	5237					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	149000	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20000	500						13.0	21	
Surr: BFB	270000		200000		133	43.1	185	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBW	Batch ID:	R5237	RunNo:	5237					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	148996	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		93.8	69.8	119			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSW	Batch ID:	R5237	RunNo:	5237					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	148997	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.40	0.050	0.5000	0	80.3	75.9	119			
Surr: BFB	19		20.00		96.5	69.8	119			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R5237	RunNo:	5237					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	149013	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	20		20.00		102	55	140			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R5237	RunNo:	5237					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	149014	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	26		20.00		131	55	140			

Sample ID	1208C96-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5237	RunNo:	5237					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	149016	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	19		20.00		95.7	55	140			

Sample ID	1208C96-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5237	RunNo:	5237					
Prep Date:		Analysis Date:	8/30/2012	SeqNo:	149017	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	22		20.00		111	55	140	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: b3	SampType: MBLK	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: PBW	Batch ID: R5276	RunNo: 5276								
Prep Date:	Analysis Date: 8/31/2012	SeqNo: 150165 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								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.5	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		82.2	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.5	70	130			
Surr: Toluene-d8	7.3		10.00		73.3	70	130			

Sample ID: 100ng lcs2	SampType: LCS	TestCode: EPA Method 8260: Volatiles Short List								
Client ID: LCSW	Batch ID: R5276	RunNo: 5276								
Prep Date:	Analysis Date: 8/31/2012	SeqNo: 150166 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	19	1.0	20.00	0	96.2	80	120			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.9	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.4	70	130			
Surr: Toluene-d8	8.0		10.00		79.7	70	130			

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150096	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								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B42

Fall Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml-rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R5276		RunNo: 5276						
Prep Date:		Analysis Date: 8/31/2012		SeqNo: 150096		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.5	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		87.2	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.5	70	130			
Surr: Toluene-d8	8.1		10.00		80.9	70	130			

Sample ID	100ng lcs	SampType: LCS			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID: R5276			RunNo: 5276					
Prep Date:		Analysis Date: 8/31/2012			SeqNo: 150102		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.0	70	130			
Toluene	20	1.0	20.00	0	98.3	80	120			
Chlorobenzene	19	1.0	20.00	0	95.3	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	92.3	73.7	122			
Trichloroethene (TCE)	18	1.0	20.00	0	92.0	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.3	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		83.2	70	130			

Modifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150102	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	8.3		10.00		83.1	70	130			
Surr: Toluene-d8	8.6		10.00		86.0	70	130			

Sample ID	1208b33-001a ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150105	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.2	66.8	128			
Toluene	19	1.0	20.00	0	93.4	70	130			
Chlorobenzene	18	1.0	20.00	0	87.7	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.8	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.7	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		81.9	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.3	70	130			
Surr: Toluene-d8	8.1		10.00		80.9	70	130			

Sample ID	1208b33-001a msd	SampType:	MSD	TestCode: EPA Method 8260B: VOLATILES						
Client ID:	BatchQC	Batch ID:	R5276	RunNo: 5276						
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150106	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.0	66.8	128	3.31	16.7	
Toluene	18	1.0	20.00	0	92.1	70	130	1.37	18.7	
Chlorobenzene	18	1.0	20.00	0	88.2	70	130	0.567	19.5	
1,1-Dichloroethene	18	1.0	20.00	0	88.3	70	130	3.50	16.7	
Trichloroethene (TCE)	16	1.0	20.00	0	80.0	70	130	9.39	17.5	
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.4		10.00		83.7	70	130	0	0	
Surr: Dibromofluoromethane	8.2		10.00		82.3	70	130	0	0	
Surr: Toluene-d8	8.4		10.00		83.6	70	130	0	0	

Sample ID	b3	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R5276		RunNo:	5276				
Prep Date:		Analysis Date:	8/31/2012		SeqNo:	150141	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								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B42

Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: b3	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R5276	RunNo: 5276								
Prep Date:	Analysis Date: 8/31/2012	SeqNo: 150141	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
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								

Modifiers:

Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID b3	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150141		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.5	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		82.2	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.5	70	130			
Surr: Toluene-d8	7.3		10.00		73.3	70	130			

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150143		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	19	1.0	20.00	0	96.2	80	120			
Chlorobenzene	18	1.0	20.00	0	90.4	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	87.5	73.7	122			
Trichloroethene (TCE)	17	1.0	20.00	0	83.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.9	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.4	70	130			
Surr: Toluene-d8	8.0		10.00		79.7	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208b42-003a ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	MW-4	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	9/1/2012	SeqNo:	150144	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	98.1	66.8	128			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	92.5	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	89.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.8	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.7	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.6	70	130			
Surr: Toluene-d8	8.7		10.00		87.0	70	130			

Sample ID	1208b42-003a msd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	MW-4	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	9/1/2012	SeqNo:	150145	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	92.7	66.8	128	5.60	16.7	
Toluene	19	1.0	20.00	0	93.1	70	130	11.3	18.7	
Chlorobenzene	19	1.0	20.00	0	92.5	70	130	9.49	19.5	
1,1-Dichloroethene	18	1.0	20.00	0	88.4	70	130	4.61	16.7	
Trichloroethene (TCE)	17	1.0	20.00	0	84.3	70	130	5.77	17.5	
Surr: 1,2-Dichloroethane-d4	8.3		10.00		82.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.6		10.00		85.7	70	130	0	0	
Surr: Dibromofluoromethane	8.4		10.00		83.9	70	130	0	0	
Surr: Toluene-d8	8.6		10.00		85.5	70	130	0	0	

Sample ID	b7	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R5276			RunNo: 5276					
Prep Date:		Analysis Date: 9/1/2012			SeqNo: 150170		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								

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: b7	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R5276	RunNo: 5276								
Prep Date:	Analysis Date: 9/1/2012	SeqNo: 150170	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
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								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID b7	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 9/1/2012		SeqNo: 150170		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.8	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.7	70	130			
Surr: Toluene-d8	8.2		10.00		82.4	70	130			

Sample ID 100ng lcs3	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 9/1/2012		SeqNo: 150173		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.7	70	130			
Toluene	19	1.0	20.00	0	94.8	80	120			
Chlorobenzene	18	1.0	20.00	0	92.3	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	87.5	73.7	122			
Trichloroethene (TCE)	17	1.0	20.00	0	86.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.1	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		82.6	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.7	70	130			
Surr: Toluene-d8	8.2		10.00		81.7	70	130			

Sample ID 1208c45-009a ms	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: BatchQC	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 9/1/2012		SeqNo: 150176		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.6	66.8	128			
Toluene	19	1.0	20.00	0	95.4	70	130			
Chlorobenzene	18	1.0	20.00	0	89.0	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.1	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0.3838	86.1	70	130			

Modifiers:

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- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208c45-009a ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	9/1/2012	SeqNo:	150176	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.7	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.7	70	130			
Surr: Dibromofluoromethane	8.8		10.00		87.8	70	130			
Surr: Toluene-d8	8.3		10.00		82.6	70	130			

Sample ID	1208c45-009a msd			SampType:	MSD		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	BatchQC			Batch ID:	R5276		RunNo:	5276			
Prep Date:				Analysis Date:	9/1/2012		SeqNo:	150177		Units:	µg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	18	1.0	20.00	0	90.2	66.8	128	5.78	16.7		
Toluene	19	1.0	20.00	0	93.6	70	130	1.86	18.7		
Chlorobenzene	18	1.0	20.00	0	89.4	70	130	0.446	19.5		
1,1-Dichloroethene	17	1.0	20.00	0	85.0	70	130	6.99	16.7		
Trichloroethene (TCE)	16	1.0	20.00	0.3838	80.3	70	130	6.85	17.5		
Surr: 1,2-Dichloroethane-d4	8.0		10.00		79.9	70	130	0	0		
Surr: 4-Bromofluorobenzene	8.8		10.00		88.2	70	130	0	0		
Surr: Dibromofluoromethane	7.8		10.00		77.5	70	130	0	0		
Surr: Toluene-d8	8.3		10.00		82.9	70	130	0	0		

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B42

All Environmental Analysis Laboratory, Inc.

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3505	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3505	RunNo:	5155					
Prep Date:	8/28/2012	Analysis Date:	8/28/2012	SeqNo:	146455	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								
Bis(4-nonyl 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								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								

Modifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3505	SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles						
Client ID:	PBW	Batch ID: 3505		RunNo: 5155						
Prep Date:	8/28/2012	Analysis Date: 8/28/2012		SeqNo: 146455		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	20								
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: 2,4,6-Tribromophenol	100		200.0		50.6	44.2	126			
Surr: 2-Fluorobiphenyl	40		100.0		40.2	37	114			
Surr: 2-Fluorophenol	75		200.0		37.6	23.4	98			
Surr: 4-Terphenyl-d14	48		100.0		47.9	41.3	116			
Surr: Nitrobenzene-d5	45		100.0		45.2	39.5	118			
Surr: Phenol-d5	65		200.0		32.4	20.9	95.9			

Qualifiers:

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- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
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- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Full Environmental Analysis Laboratory, Inc.

WO#: 1208B42

25-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	lcs-3505		SampType:	LCS		TestCode:	EPA Method 8270C: Semivolatiles			
Client ID:	LCSW		Batch ID:	3505		RunNo:	5155			
Prep Date:	8/28/2012		Analysis Date:	8/28/2012		SeqNo:	146457		Units: µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	59.7	38.2	99.4			
4-Chloro-3-methylphenol	140	10	200.0	0	68.5	35.5	108			
2-Chlorophenol	110	10	200.0	0	56.0	29.8	106			
1,4-Dichlorobenzene	44	10	100.0	0	44.5	32.6	91.5			
2,4-Dinitrotoluene	75	10	100.0	0	74.6	44.7	112			
N-Nitrosodi-n-propylamine	65	10	100.0	0	65.1	38.5	105			
4-Nitrophenol	100	10	200.0	0	49.9	11.6	73.1			
Pentachlorophenol	130	20	200.0	0	64.4	20.2	93			
Phenol	82	10	200.0	0	41.2	23	66.1			
Pyrene	59	10	100.0	0	59.2	40.1	101			
1,2,4-Trichlorobenzene	52	10	100.0	0	51.6	37.7	99.1			
Surr: 2,4,6-Tribromophenol	170		200.0		83.6	44.2	126			
Surr: 2-Fluorobiphenyl	59		100.0		58.7	37	114			
Surr: 2-Fluorophenol	100		200.0		51.2	23.4	98			
Surr: 4-Terphenyl-d14	68		100.0		68.3	41.3	116			
Surr: Nitrobenzene-d5	61		100.0		60.5	39.5	118			
Surr: Phenol-d5	86		200.0		43.1	20.9	95.9			

Sample ID	lcsd-3505		SampType:	LCSD		TestCode:	EPA Method 8270C: Semivolatiles			
Client ID:	LCSS02		Batch ID:	3505		RunNo:	5155			
Prep Date:	8/28/2012		Analysis Date:	8/28/2012		SeqNo:	146459		Units: µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	59	10	100.0	0	58.5	38.2	99.4	2.03	20	
4-Chloro-3-methylphenol	140	10	200.0	0	68.1	35.5	108	0.512	20	
2-Chlorophenol	120	10	200.0	0	58.1	29.8	106	3.61	20	
1,4-Dichlorobenzene	45	10	100.0	0	44.7	32.6	91.5	0.583	20	
2,4-Dinitrotoluene	74	10	100.0	0	73.7	44.7	112	1.21	20	
N-Nitrosodi-n-propylamine	65	10	100.0	0	65.0	38.5	105	0.154	20	
4-Nitrophenol	94	10	200.0	0	47.0	11.6	73.1	5.86	20	
Pentachlorophenol	130	20	200.0	0	63.8	20.2	93	0.968	20	
Phenol	82	10	200.0	0	41.1	23	66.1	0.170	20	
Pyrene	64	10	100.0	0	64.4	40.1	101	8.28	20	
1,2,4-Trichlorobenzene	57	10	100.0	0	57.2	37.7	99.1	10.3	20	
Surr: 2,4,6-Tribromophenol	170		200.0		86.3	44.2	126	0	0	
Surr: 2-Fluorobiphenyl	63		100.0		63.0	37	114	0	0	
Surr: 2-Fluorophenol	97		200.0		48.6	23.4	98	0	0	
Surr: 4-Terphenyl-d14	71		100.0		71.1	41.3	116	0	0	
Surr: Nitrobenzene-d5	70		100.0		69.6	39.5	118	0	0	
Surr: Phenol-d5	88		200.0		44.2	20.9	95.9	0	0	

Modifiers:

- V Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits



Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87106
TEL: 505-345-3975 FAX: 505-345-4101
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name:	Western Refining Gallup	Work Order Number:	1208B42
Received by/date:	<i>[Signature]</i> 08/24/12		
Logged By:	Anne Thorne	8/24/2012 3:40:00 PM	<i>[Signature]</i>
Completed By:	Anne Thorne	8/27/2012	<i>[Signature]</i>
Reviewed By:	<i>[Signature]</i> 08/27/12		

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

012
(≥ 2 or >12 unless noted)

Adjusted? _____

Checked by: *[Signature]*

Special Handling (if applicable)

17. 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:	_____		

18. Additional remarks:

19. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Client: W6 1 Refining		☐ Standard ☐ Rush				
Mailing Address: Rt 3 Box 7		Project Name: 3rd QTR 2012 Groundwater Sampling				
Phone #: 505-722-3833		Project #: Annual Sampling				
email or Fax#: 505-722-0210		Project Manager: Cheryl Johnson				
QA/QC Package: ☐ Standard ☐ Level 4 (Full Validation)		Sampler: ☒ Yes ☐ No				
Accreditation: ☐ NELAP ☐ Other		Sample Temperature: 1.0				
☐ EDD (Type)		HEAL No. 1208 B42				
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
8/24/12	1030	GW	MW-1	11		-001
8/24/12	1050	GW	MW-2	11		-002
8/24/12	2030	GW	MW-4	11		-003
8/23/12	0805	GW	MW-5	11		-004
8/24/12	1130	W	Field Blank	3		-005
8/24/12	-	W	Trip Blank	3		-
		no				
		Trip Blank		15 08/27/12		
Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
8/24/12	1540	<i>[Signature]</i>	<i>[Signature]</i>	08/24/12	1540	
Date:	Time:	Relinquished by:	Received by:	Date	Time	

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



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

September 26, 2012

Cheryl Johnson

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-0231

FAX (505) 722-0210

RE: 3rd QTR 2012 Groundwater Sampling

OrderNo.: 1208988

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/22/2012 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. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. 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.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: NAPIS-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 2:55:00 PM

Lab ID: 1208988-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/23/2012 2:20:19 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/23/2012 2:20:19 PM
Surr: DNOP	134	79.5-166		%REC	1	8/23/2012 2:20:19 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/23/2012 6:12:59 PM
Surr: BFB	107	69.8-119		%REC	1	8/23/2012 6:12:59 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.54	0.50		mg/L	5	8/25/2012 12:50:38 AM
Chloride	96	10		mg/L	20	8/23/2012 12:41:30 AM
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	8/23/2012 12:29:05 AM
Bromide	1.8	0.50		mg/L	5	8/23/2012 12:29:05 AM
Nitrogen, Nitrate (As N)	2.6	0.50		mg/L	5	8/23/2012 12:29:05 AM
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	8/23/2012 12:29:05 AM
Sulfate	52	2.5		mg/L	5	8/23/2012 12:29:05 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: JLF
Barium	0.12	0.0020		mg/L	1	9/11/2012 3:09:31 PM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 3:09:31 PM
Calcium	73	1.0		mg/L	1	9/10/2012 6:29:22 PM
Chromium	ND	0.0060		mg/L	1	9/11/2012 3:09:31 PM
Copper	ND	0.0060		mg/L	1	9/11/2012 3:09:31 PM
Iron	ND	0.020		mg/L	1	9/10/2012 6:29:22 PM
Lead	ND	0.0050		mg/L	1	9/11/2012 3:09:31 PM
Magnesium	13	1.0		mg/L	1	9/10/2012 6:29:22 PM
Manganese	0.011	0.0020		mg/L	1	9/11/2012 3:09:31 PM
Potassium	ND	1.0		mg/L	1	9/10/2012 6:29:22 PM
Silver	ND	0.0050		mg/L	1	9/11/2012 3:09:31 PM
Sodium	350	5.0		mg/L	5	9/10/2012 6:34:42 PM
Zinc	0.017	0.010		mg/L	1	9/11/2012 3:09:31 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: ELS
Barium	0.13	0.0020		mg/L	1	9/5/2012 9:34:06 AM
Cadmium	ND	0.0020		mg/L	1	9/5/2012 9:34:06 AM
Chromium	ND	0.0060		mg/L	1	9/5/2012 9:34:06 AM
Copper	ND	0.0060		mg/L	1	9/5/2012 9:34:06 AM
Iron	0.066	0.020		mg/L	1	9/5/2012 9:34:06 AM
Lead	ND	0.0050		mg/L	1	9/5/2012 9:34:06 AM
Manganese	0.018	0.0020		mg/L	1	9/5/2012 9:34:06 AM
Silver	ND	0.0050		mg/L	1	9/5/2012 9:34:06 AM
Zinc	ND	0.010		mg/L	1	9/5/2012 9:34:06 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: NAPIS-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 2:55:00 PM

Lab ID: 1208988-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0021	0.0010		mg/L	1	9/6/2012 1:18:12 PM
Selenium	0.0043	0.0010		mg/L	1	9/6/2012 1:18:12 PM
Uranium	0.011	0.0010		mg/L	1	9/6/2012 1:18:12 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 5:30:42 PM
Selenium	0.0043	0.0025		mg/L	2.5	9/6/2012 5:30:42 PM
Uranium	0.0094	0.0025		mg/L	2.5	9/13/2012 1:11:29 PM
EPA METHOD 245.1: MERCURY						Analyst: TES
Mercury	ND	0.00020		mg/L	1	9/11/2012 12:47:11 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Acenaphthylene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Aniline	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Anthracene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Azobenzene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Benz(a)anthracene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Benzoic acid	ND	20		µg/L	1	8/28/2012 11:51:29 PM
Benzyl alcohol	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/28/2012 11:51:29 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Carbazole	ND	10		µg/L	1	8/28/2012 11:51:29 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/28/2012 11:51:29 PM
4-Chloroaniline	ND	10		µg/L	1	8/28/2012 11:51:29 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
2-Chlorophenol	ND	10		µg/L	1	8/28/2012 11:51:29 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Chrysene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Dibenzofuran	ND	10		µg/L	1	8/28/2012 11:51:29 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 11:51:29 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: NAPIS-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 2:55:00 PM

Lab ID: 1208988-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,3-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
1,4-Dichlorobenzene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Diethyl phthalate	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Dimethyl phthalate	ND	10		µg/L	1	8/28/2012 11:51:29 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/28/2012 11:51:29 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/28/2012 11:51:29 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/28/2012 11:51:29 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/28/2012 11:51:29 PM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Fluoranthene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Fluorene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Hexachlorobenzene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Hexachloroethane	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Isophorone	ND	10		µg/L	1	8/28/2012 11:51:29 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
2-Methylphenol	ND	10		µg/L	1	8/28/2012 11:51:29 PM
3+4-Methylphenol	ND	10		µg/L	1	8/28/2012 11:51:29 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/28/2012 11:51:29 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/28/2012 11:51:29 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Naphthalene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
2-Nitroaniline	ND	10		µg/L	1	8/28/2012 11:51:29 PM
3-Nitroaniline	ND	10		µg/L	1	8/28/2012 11:51:29 PM
4-Nitroaniline	ND	20		µg/L	1	8/28/2012 11:51:29 PM
Nitrobenzene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
2-Nitrophenol	ND	10		µg/L	1	8/28/2012 11:51:29 PM
4-Nitrophenol	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Pentachlorophenol	ND	20		µg/L	1	8/28/2012 11:51:29 PM
Phenanthrene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Phenol	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Pyrene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Pyridine	ND	10		µg/L	1	8/28/2012 11:51:29 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/28/2012 11:51:29 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/28/2012 11:51:29 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/28/2012 11:51:29 PM
Surr: 2,4,6-Tribromophenol	103	44.2-126		%REC	1	8/28/2012 11:51:29 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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

Lab Order 1208988

Date Reported: 9/26/2012

CLIENT: Western Refining Southwest, Gallup**Client Sample ID:** NAPIS-1**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/21/2012 2:55:00 PM**Lab ID:** 1208988-001**Matrix:** AQUEOUS**Received Date:** 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorobiphenyl	87.2	37-114		%REC	1	8/28/2012 11:51:29 PM
Surr: 2-Fluorophenol	72.2	23.4-98		%REC	1	8/28/2012 11:51:29 PM
Surr: 4-Terphenyl-d14	83.9	41.3-116		%REC	1	8/28/2012 11:51:29 PM
Surr: Nitrobenzene-d5	92.7	39.5-118		%REC	1	8/28/2012 11:51:29 PM
Surr: Phenol-d5	52.0	20.9-95.9		%REC	1	8/28/2012 11:51:29 PM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Toluene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Ethylbenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Naphthalene	ND	2.0		µg/L	1	8/24/2012 3:51:25 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 3:51:25 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 3:51:25 PM
Acetone	ND	10		µg/L	1	8/24/2012 3:51:25 PM
Bromobenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Bromoform	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Bromomethane	ND	3.0		µg/L	1	8/24/2012 3:51:25 PM
2-Butanone	ND	10		µg/L	1	8/24/2012 3:51:25 PM
Carbon disulfide	ND	10		µg/L	1	8/24/2012 3:51:25 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Chlorobenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Chloroethane	ND	2.0		µg/L	1	8/24/2012 3:51:25 PM
Chloroform	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Chloromethane	ND	3.0		µg/L	1	8/24/2012 3:51:25 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/24/2012 3:51:25 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Dibromomethane	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: NAPIS-1

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 2:55:00 PM

Lab ID: 1208988-001

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
1,1-Dichloroethene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/24/2012 3:51:25 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
2-Hexanone	ND	10		µg/L	1	8/24/2012 3:51:25 PM
Isopropylbenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/24/2012 3:51:25 PM
Methylene Chloride	ND	3.0		µg/L	1	8/24/2012 3:51:25 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/24/2012 3:51:25 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Styrene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/24/2012 3:51:25 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/24/2012 3:51:25 PM
Vinyl chloride	ND	1.0		µg/L	1	8/24/2012 3:51:25 PM
Xylenes, Total	ND	1.5		µg/L	1	8/24/2012 3:51:25 PM
Surr: 1,2-Dichloroethane-d4	95.0	70-130		%REC	1	8/24/2012 3:51:25 PM
Surr: 4-Bromofluorobenzene	96.4	70-130		%REC	1	8/24/2012 3:51:25 PM
Surr: Dibromofluoromethane	93.5	70-130		%REC	1	8/24/2012 3:51:25 PM
Surr: Toluene-d8	100	70-130		%REC	1	8/24/2012 3:51:25 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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

Lab Order 1208988

Date Reported: 9/26/2012

CLIENT: Western Refining Southwest, Gallup**Client Sample ID:** NAPIS-2**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/21/2012 4:20:00 PM**Lab ID:** 1208988-002**Matrix:** AQUEOUS**Received Date:** 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/23/2012 2:42:06 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/23/2012 2:42:06 PM
Surr: DNOP	133	79.5-166		%REC	1	8/23/2012 2:42:06 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1.4	0.50		mg/L	10	8/23/2012 6:43:11 PM
Surr: BFB	111	69.8-119		%REC	10	8/23/2012 6:43:11 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	1.6	0.50		mg/L	5	8/24/2012 7:14:58 AM
Chloride	370	10		mg/L	20	8/23/2012 1:18:43 AM
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	8/23/2012 1:06:19 AM
Bromide	1.4	0.50		mg/L	5	8/23/2012 1:06:19 AM
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	8/23/2012 1:06:19 AM
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	8/23/2012 1:06:19 AM
Sulfate	11	2.5		mg/L	5	8/23/2012 1:06:19 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: JLF
Barium	2.7	0.010	*	mg/L	5	9/11/2012 3:21:13 PM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 3:16:34 PM
Calcium	110	5.0		mg/L	5	9/11/2012 3:21:13 PM
Chromium	ND	0.0060		mg/L	1	9/11/2012 3:16:34 PM
Copper	ND	0.0060		mg/L	1	9/11/2012 3:16:34 PM
Iron	1.9	0.10	*	mg/L	5	9/11/2012 3:21:13 PM
Lead	ND	0.0050		mg/L	1	9/11/2012 3:16:34 PM
Magnesium	21	1.0		mg/L	1	9/11/2012 3:16:34 PM
Manganese	1.6	0.010	*	mg/L	5	9/11/2012 3:21:13 PM
Potassium	ND	1.0		mg/L	1	9/11/2012 3:16:34 PM
Silver	ND	0.0050		mg/L	1	9/11/2012 3:16:34 PM
Sodium	380	5.0		mg/L	5	9/11/2012 3:21:13 PM
Zinc	0.016	0.010		mg/L	1	9/11/2012 3:16:34 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: ELS
Barium	1.7	0.010		mg/L	5	9/5/2012 9:45:03 AM
Cadmium	ND	0.0020		mg/L	1	9/5/2012 9:41:52 AM
Chromium	ND	0.0060		mg/L	1	9/5/2012 9:41:52 AM
Copper	ND	0.0060		mg/L	1	9/5/2012 9:41:52 AM
Iron	3.1	0.10	*	mg/L	5	9/5/2012 9:45:03 AM
Lead	ND	0.0050		mg/L	1	9/5/2012 9:41:52 AM
Manganese	1.7	0.010	*	mg/L	5	9/5/2012 9:45:03 AM
Silver	ND	0.0050		mg/L	1	9/5/2012 9:41:52 AM
Zinc	ND	0.010		mg/L	1	9/5/2012 9:41:52 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: NAPIS-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 4:20:00 PM

Lab ID: 1208988-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.014	0.0010	*	mg/L	1	9/6/2012 1:22:08 PM
Selenium	0.0037	0.0010		mg/L	1	9/6/2012 1:22:08 PM
Uranium	ND	0.0010		mg/L	1	9/6/2012 1:22:08 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.0097	0.0025		mg/L	2.5	9/6/2012 5:32:34 PM
Selenium	0.0031	0.0025		mg/L	2.5	9/6/2012 5:32:34 PM
Uranium	ND	0.0025		mg/L	2.5	9/13/2012 1:13:21 PM
EPA METHOD 245.1: MERCURY						Analyst: TES
Mercury	ND	0.00020		mg/L	1	9/11/2012 12:48:56 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Acenaphthylene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Aniline	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Anthracene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Azobenzene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Benz(a)anthracene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Benzo(a)pyrene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Benzoic acid	ND	20		µg/L	1	8/29/2012 12:21:27 AM
Benzyl alcohol	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/29/2012 12:21:27 AM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Butyl benzyl phthalate	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Carbazole	ND	10		µg/L	1	8/29/2012 12:21:27 AM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/29/2012 12:21:27 AM
4-Chloroaniline	ND	10		µg/L	1	8/29/2012 12:21:27 AM
2-Chloronaphthalene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
2-Chlorophenol	ND	10		µg/L	1	8/29/2012 12:21:27 AM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Chrysene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Di-n-butyl phthalate	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Di-n-octyl phthalate	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Dibenzofuran	ND	10		µg/L	1	8/29/2012 12:21:27 AM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 12:21:27 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: NAPIS-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 4:20:00 PM

Lab ID: 1208988-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,3-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
1,4-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Diethyl phthalate	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Dimethyl phthalate	ND	10		µg/L	1	8/29/2012 12:21:27 AM
2,4-Dichlorophenol	ND	20		µg/L	1	8/29/2012 12:21:27 AM
2,4-Dimethylphenol	ND	10		µg/L	1	8/29/2012 12:21:27 AM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/29/2012 12:21:27 AM
2,4-Dinitrophenol	ND	20		µg/L	1	8/29/2012 12:21:27 AM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Fluoranthene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Fluorene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Hexachlorobenzene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Hexachlorobutadiene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Hexachloroethane	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Isophorone	ND	10		µg/L	1	8/29/2012 12:21:27 AM
1-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
2-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
2-Methylphenol	ND	10		µg/L	1	8/29/2012 12:21:27 AM
3+4-Methylphenol	ND	10		µg/L	1	8/29/2012 12:21:27 AM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/29/2012 12:21:27 AM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/29/2012 12:21:27 AM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Naphthalene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
2-Nitroaniline	ND	10		µg/L	1	8/29/2012 12:21:27 AM
3-Nitroaniline	ND	10		µg/L	1	8/29/2012 12:21:27 AM
4-Nitroaniline	ND	20		µg/L	1	8/29/2012 12:21:27 AM
Nitrobenzene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
2-Nitrophenol	ND	10		µg/L	1	8/29/2012 12:21:27 AM
4-Nitrophenol	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Pentachlorophenol	ND	20		µg/L	1	8/29/2012 12:21:27 AM
Phenanthrene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Phenol	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Pyrene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Pyridine	ND	10		µg/L	1	8/29/2012 12:21:27 AM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/29/2012 12:21:27 AM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/29/2012 12:21:27 AM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/29/2012 12:21:27 AM
Surr: 2,4,6-Tribromophenol	75.0	44.2-126		%REC	1	8/29/2012 12:21:27 AM

Qualifiers:

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- P Sample pH greater than 2
- RL Reporting Detection Limit

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- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
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Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: NAPIS-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 4:20:00 PM

Lab ID: 1208988-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorobiphenyl	60.4	37-114		%REC	1	8/29/2012 12:21:27 AM
Surr: 2-Fluorophenol	39.5	23.4-98		%REC	1	8/29/2012 12:21:27 AM
Surr: 4-Terphenyl-d14	60.2	41.3-116		%REC	1	8/29/2012 12:21:27 AM
Surr: Nitrobenzene-d5	55.0	39.5-118		%REC	1	8/29/2012 12:21:27 AM
Surr: Phenol-d5	33.3	20.9-95.9		%REC	1	8/29/2012 12:21:27 AM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	10	5.0		µg/L	5	8/24/2012 5:16:26 PM
Toluene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Ethylbenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Methyl tert-butyl ether (MTBE)	160	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,2,4-Trimethylbenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,3,5-Trimethylbenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,2-Dichloroethane (EDC)	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,2-Dibromoethane (EDB)	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Naphthalene	ND	10		µg/L	5	8/24/2012 5:16:26 PM
1-Methylnaphthalene	ND	20		µg/L	5	8/24/2012 5:16:26 PM
2-Methylnaphthalene	ND	20		µg/L	5	8/24/2012 5:16:26 PM
Acetone	ND	50		µg/L	5	8/24/2012 5:16:26 PM
Bromobenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Bromodichloromethane	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Bromoform	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Bromomethane	ND	15		µg/L	5	8/24/2012 5:16:26 PM
2-Butanone	ND	50		µg/L	5	8/24/2012 5:16:26 PM
Carbon disulfide	ND	50		µg/L	5	8/24/2012 5:16:26 PM
Carbon Tetrachloride	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Chlorobenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Chloroethane	ND	10		µg/L	5	8/24/2012 5:16:26 PM
Chloroform	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Chloromethane	ND	15		µg/L	5	8/24/2012 5:16:26 PM
2-Chlorotoluene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
4-Chlorotoluene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
cis-1,2-DCE	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
cis-1,3-Dichloropropene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,2-Dibromo-3-chloropropane	ND	10		µg/L	5	8/24/2012 5:16:26 PM
Dibromochloromethane	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Dibromomethane	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,2-Dichlorobenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,3-Dichlorobenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,4-Dichlorobenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Dichlorodifluoromethane	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,1-Dichloroethane	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: NAPIS-2

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 4:20:00 PM

Lab ID: 1208988-002

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
1,1-Dichloroethene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,2-Dichloropropane	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,3-Dichloropropane	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
2,2-Dichloropropane	ND	10		µg/L	5	8/24/2012 5:16:26 PM
1,1-Dichloropropene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Hexachlorobutadiene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
2-Hexanone	ND	50		µg/L	5	8/24/2012 5:16:26 PM
Isopropylbenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
4-Isopropyltoluene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
4-Methyl-2-pentanone	ND	50		µg/L	5	8/24/2012 5:16:26 PM
Methylene Chloride	ND	15		µg/L	5	8/24/2012 5:16:26 PM
n-Butylbenzene	ND	15		µg/L	5	8/24/2012 5:16:26 PM
n-Propylbenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
sec-Butylbenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Styrene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
tert-Butylbenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,1,1,2-Tetrachloroethane	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,1,2,2-Tetrachloroethane	ND	10		µg/L	5	8/24/2012 5:16:26 PM
Tetrachloroethene (PCE)	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
trans-1,2-DCE	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
trans-1,3-Dichloropropene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,2,3-Trichlorobenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,2,4-Trichlorobenzene	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,1,1-Trichloroethane	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,1,2-Trichloroethane	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Trichloroethene (TCE)	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Trichlorofluoromethane	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
1,2,3-Trichloropropane	ND	10		µg/L	5	8/24/2012 5:16:26 PM
Vinyl chloride	ND	5.0		µg/L	5	8/24/2012 5:16:26 PM
Xylenes, Total	ND	7.5		µg/L	5	8/24/2012 5:16:26 PM
Surr: 1,2-Dichloroethane-d4	93.2	70-130		%REC	5	8/24/2012 5:16:26 PM
Surr: 4-Bromofluorobenzene	97.3	70-130		%REC	5	8/24/2012 5:16:26 PM
Surr: Dibromofluoromethane	88.2	70-130		%REC	5	8/24/2012 5:16:26 PM
Surr: Toluene-d8	99.1	70-130		%REC	5	8/24/2012 5:16:26 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: KA-3

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 3:45:00 PM

Lab ID: 1208988-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/23/2012 3:04:04 PM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/23/2012 3:04:04 PM
Surr: DNOP	128	79.5-166		%REC	1	8/23/2012 3:04:04 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	0.10	0.050		mg/L	1	8/27/2012 5:39:11 PM
Surr: BFB	91.1	69.8-119		%REC	1	8/27/2012 5:39:11 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	ND	2.0		mg/L	20	8/25/2012 1:03:03 AM
Chloride	250	10		mg/L	20	8/25/2012 1:03:03 AM
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	8/23/2012 1:43:33 AM
Bromide	1.2	0.10		mg/L	1	8/23/2012 1:43:33 AM
Nitrogen, Nitrate (As N)	0.31	0.10		mg/L	1	8/23/2012 1:43:33 AM
Phosphorus, Orthophosphate (As P)	ND	0.50		mg/L	1	8/23/2012 1:43:33 AM
Sulfate	43	10		mg/L	20	8/23/2012 1:55:57 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: JLF
Barium	0.17	0.0020		mg/L	1	9/11/2012 3:36:13 PM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 3:36:13 PM
Calcium	77	1.0		mg/L	1	9/11/2012 3:36:13 PM
Chromium	ND	0.0060		mg/L	1	9/11/2012 3:36:13 PM
Copper	ND	0.0060		mg/L	1	9/11/2012 3:36:13 PM
Iron	ND	0.020		mg/L	1	9/11/2012 3:36:13 PM
Lead	ND	0.0050		mg/L	1	9/11/2012 3:36:13 PM
Magnesium	13	1.0		mg/L	1	9/11/2012 3:36:13 PM
Manganese	0.39	0.0020	*	mg/L	1	9/11/2012 3:36:13 PM
Potassium	1.8	1.0		mg/L	1	9/11/2012 3:36:13 PM
Silver	ND	0.0050		mg/L	1	9/11/2012 3:36:13 PM
Sodium	430	5.0		mg/L	5	9/10/2012 6:48:11 PM
Zinc	0.022	0.010		mg/L	1	9/11/2012 3:36:13 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: ELS
Barium	0.30	0.0020		mg/L	1	9/5/2012 9:48:53 AM
Cadmium	ND	0.0020		mg/L	1	9/5/2012 9:48:53 AM
Chromium	ND	0.0060		mg/L	1	9/5/2012 9:48:53 AM
Copper	0.0070	0.0060		mg/L	1	9/5/2012 9:48:53 AM
Iron	0.32	0.020	*	mg/L	1	9/5/2012 9:48:53 AM
Lead	ND	0.0050		mg/L	1	9/5/2012 9:48:53 AM
Manganese	0.81	0.0020	*	mg/L	1	9/5/2012 9:48:53 AM
Silver	ND	0.0050		mg/L	1	9/5/2012 9:48:53 AM
Zinc	0.014	0.010		mg/L	1	9/5/2012 9:48:53 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: KA-3

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 3:45:00 PM

Lab ID: 1208988-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0031	0.0010		mg/L	1	9/6/2012 1:26:04 PM
Selenium	0.0047	0.0010		mg/L	1	9/6/2012 1:26:04 PM
Uranium	0.013	0.0010		mg/L	1	9/6/2012 1:26:04 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.0028	0.0025		mg/L	2.5	9/6/2012 5:34:26 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 5:34:26 PM
Uranium	0.0043	0.0025		mg/L	2.5	9/13/2012 1:15:14 PM
EPA METHOD 245.1: MERCURY						Analyst: TES
Mercury	ND	0.00020		mg/L	1	9/11/2012 12:50:41 PM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Acenaphthylene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Aniline	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Anthracene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Azobenzene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Benz(a)anthracene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Benzo(a)pyrene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Benzoic acid	ND	20		µg/L	1	8/29/2012 12:51:22 AM
Benzyl alcohol	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/29/2012 12:51:22 AM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Butyl benzyl phthalate	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Carbazole	ND	10		µg/L	1	8/29/2012 12:51:22 AM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/29/2012 12:51:22 AM
4-Chloroaniline	ND	10		µg/L	1	8/29/2012 12:51:22 AM
2-Chloronaphthalene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
2-Chlorophenol	ND	10		µg/L	1	8/29/2012 12:51:22 AM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Chrysene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Di-n-butyl phthalate	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Di-n-octyl phthalate	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Dibenzofuran	ND	10		µg/L	1	8/29/2012 12:51:22 AM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 12:51:22 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: KA-3

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 3:45:00 PM

Lab ID: 1208988-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,3-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
1,4-Dichlorobenzene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Diethyl phthalate	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Dimethyl phthalate	ND	10		µg/L	1	8/29/2012 12:51:22 AM
2,4-Dichlorophenol	ND	20		µg/L	1	8/29/2012 12:51:22 AM
2,4-Dimethylphenol	ND	10		µg/L	1	8/29/2012 12:51:22 AM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/29/2012 12:51:22 AM
2,4-Dinitrophenol	ND	20		µg/L	1	8/29/2012 12:51:22 AM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Fluoranthene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Fluorene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Hexachlorobenzene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Hexachlorobutadiene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Hexachloroethane	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Isophorone	ND	10		µg/L	1	8/29/2012 12:51:22 AM
1-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
2-Methylnaphthalene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
2-Methylphenol	ND	10		µg/L	1	8/29/2012 12:51:22 AM
3+4-Methylphenol	ND	10		µg/L	1	8/29/2012 12:51:22 AM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/29/2012 12:51:22 AM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/29/2012 12:51:22 AM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Naphthalene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
2-Nitroaniline	ND	10		µg/L	1	8/29/2012 12:51:22 AM
3-Nitroaniline	ND	10		µg/L	1	8/29/2012 12:51:22 AM
4-Nitroaniline	ND	20		µg/L	1	8/29/2012 12:51:22 AM
Nitrobenzene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
2-Nitrophenol	ND	10		µg/L	1	8/29/2012 12:51:22 AM
4-Nitrophenol	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Pentachlorophenol	ND	20		µg/L	1	8/29/2012 12:51:22 AM
Phenanthrene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Phenol	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Pyrene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Pyridine	ND	10		µg/L	1	8/29/2012 12:51:22 AM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/29/2012 12:51:22 AM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/29/2012 12:51:22 AM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/29/2012 12:51:22 AM
Surr: 2,4,6-Tribromophenol	99.8	44.2-126		%REC	1	8/29/2012 12:51:22 AM

Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: KA-3

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 3:45:00 PM

Lab ID: 1208988-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorobiphenyl	87.1	37-114		%REC	1	8/29/2012 12:51:22 AM
Surr: 2-Fluorophenol	64.8	23.4-98		%REC	1	8/29/2012 12:51:22 AM
Surr: 4-Terphenyl-d14	80.6	41.3-116		%REC	1	8/29/2012 12:51:22 AM
Surr: Nitrobenzene-d5	91.0	39.5-118		%REC	1	8/29/2012 12:51:22 AM
Surr: Phenol-d5	50.4	20.9-95.9		%REC	1	8/29/2012 12:51:22 AM
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Toluene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Ethylbenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Methyl tert-butyl ether (MTBE)	23	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Naphthalene	ND	2.0		µg/L	1	8/24/2012 5:44:42 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 5:44:42 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 5:44:42 PM
Acetone	ND	10		µg/L	1	8/24/2012 5:44:42 PM
Bromobenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Bromoform	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Bromomethane	ND	3.0		µg/L	1	8/24/2012 5:44:42 PM
2-Butanone	ND	10		µg/L	1	8/24/2012 5:44:42 PM
Carbon disulfide	ND	10		µg/L	1	8/24/2012 5:44:42 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Chlorobenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Chloroethane	ND	2.0		µg/L	1	8/24/2012 5:44:42 PM
Chloroform	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Chloromethane	ND	3.0		µg/L	1	8/24/2012 5:44:42 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/24/2012 5:44:42 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Dibromomethane	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM

Qualifiers:

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Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: KA-3

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 3:45:00 PM

Lab ID: 1208988-003

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
1,1-Dichloroethene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/24/2012 5:44:42 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
2-Hexanone	ND	10		µg/L	1	8/24/2012 5:44:42 PM
Isopropylbenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/24/2012 5:44:42 PM
Methylene Chloride	ND	3.0		µg/L	1	8/24/2012 5:44:42 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/24/2012 5:44:42 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Styrene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/24/2012 5:44:42 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/24/2012 5:44:42 PM
Vinyl chloride	ND	1.0		µg/L	1	8/24/2012 5:44:42 PM
Xylenes, Total	ND	1.5		µg/L	1	8/24/2012 5:44:42 PM
Surr: 1,2-Dichloroethane-d4	97.7	70-130		%REC	1	8/24/2012 5:44:42 PM
Surr: 4-Bromofluorobenzene	96.8	70-130		%REC	1	8/24/2012 5:44:42 PM
Surr: Dibromofluoromethane	93.0	70-130		%REC	1	8/24/2012 5:44:42 PM
Surr: Toluene-d8	99.9	70-130		%REC	1	8/24/2012 5:44:42 PM

Qualifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 4:30:00 PM

Lab ID: 1208988-004

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Benzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Toluene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Ethylbenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Naphthalene	ND	2.0		µg/L	1	8/24/2012 6:13:00 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 6:13:00 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/24/2012 6:13:00 PM
Acetone	ND	10		µg/L	1	8/24/2012 6:13:00 PM
Bromobenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Bromoform	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Bromomethane	ND	3.0		µg/L	1	8/24/2012 6:13:00 PM
2-Butanone	ND	10		µg/L	1	8/24/2012 6:13:00 PM
Carbon disulfide	ND	10		µg/L	1	8/24/2012 6:13:00 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Chlorobenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Chloroethane	ND	2.0		µg/L	1	8/24/2012 6:13:00 PM
Chloroform	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Chloromethane	ND	3.0		µg/L	1	8/24/2012 6:13:00 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/24/2012 6:13:00 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Dibromomethane	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/24/2012 6:13:00 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
2-Hexanone	ND	10		µg/L	1	8/24/2012 6:13:00 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208988

Date Reported: 9/26/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/21/2012 4:30:00 PM

Lab ID: 1208988-004

Matrix: AQUEOUS

Received Date: 8/22/2012 1:22:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DJF
Isopropylbenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/24/2012 6:13:00 PM
Methylene Chloride	ND	3.0		µg/L	1	8/24/2012 6:13:00 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/24/2012 6:13:00 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Styrene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/24/2012 6:13:00 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/24/2012 6:13:00 PM
Vinyl chloride	ND	1.0		µg/L	1	8/24/2012 6:13:00 PM
Xylenes, Total	ND	1.5		µg/L	1	8/24/2012 6:13:00 PM
Surr: 1,2-Dichloroethane-d4	92.7	70-130		%REC	1	8/24/2012 6:13:00 PM
Surr: 4-Bromofluorobenzene	100	70-130		%REC	1	8/24/2012 6:13:00 PM
Surr: Dibromofluoromethane	83.7	70-130		%REC	1	8/24/2012 6:13:00 PM
Surr: Toluene-d8	98.2	70-130		%REC	1	8/24/2012 6:13:00 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID MB	SampType: MBLK		TestCode: EPA Method 200.7: Metals							
Client ID: PBW	Batch ID: R5414		RunNo: 5414							
Prep Date:	Analysis Date: 9/10/2012		SeqNo: 154616		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID LCS	SampType: LCS		TestCode: EPA Method 200.7: Metals							
Client ID: LCSW	Batch ID: R5414		RunNo: 5414							
Prep Date:	Analysis Date: 9/10/2012		SeqNo: 154617		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			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Magnesium	51	1.0	50.00	0	102	85	115			
Potassium	49	1.0	50.00	0	97.7	85	115			
Sodium	50	1.0	50.00	0	99.7	85	115			

ifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB		SampType:	MBLK		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	PBW		Batch ID:	R5414		RunNo:	5414			
Prep Date:			Analysis Date:	9/10/2012		SeqNo:	154618		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Iron	ND	0.020								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID	LCS		SampType:	LCS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	LCSW		Batch ID:	R5414		RunNo:	5414			
Prep Date:			Analysis Date:	9/10/2012		SeqNo:	154619		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	99.3	85	115			
Iron	0.49	0.020	0.5000	0	97.4	85	115			
Magnesium	50	1.0	50.00	0	101	85	115			
Potassium	48	1.0	50.00	0	96.2	85	115			
Sodium	49	1.0	50.00	0	98.3	85	115			

Sample ID	1208944-002AMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5414		RunNo:	5414			
Prep Date:			Analysis Date:	9/10/2012		SeqNo:	154694		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	230	5.0	250.0	5.623	89.7	70	130			
Sodium	330	5.0	250.0	96.58	94.7	70	130			

Sample ID	1208944-002AMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5414		RunNo:	5414			
Prep Date:			Analysis Date:	9/10/2012		SeqNo:	154695		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	230	5.0	250.0	5.623	88.3	70	130	1.51	20	
Sodium	330	5.0	250.0	96.58	91.5	70	130	2.47	20	

Sample ID	MB		SampType:	MBLK		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	PBW		Batch ID:	R5435		RunNo:	5435			
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155088		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								

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID MB	SampType: MBLK		TestCode: EPA Method 200.7: Dissolved Metals							
Client ID: PBW	Batch ID: R5435		RunNo: 5435							
Prep Date:	Analysis Date: 9/11/2012		SeqNo: 155088		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0060								
Iron	ND	0.020								
Lead	ND	0.0050								
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: R5435		RunNo: 5435							
Prep Date:	Analysis Date: 9/11/2012		SeqNo: 155089		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.51	0.0020	0.5000	0	102	85	115			
Bismuth	0.51	0.0020	0.5000	0	102	85	115			
Calcium	54	1.0	50.00	0	108	85	115			
Chromium	0.50	0.0060	0.5000	0	99.5	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.49	0.020	0.5000	0	98.7	85	115			
Lead	0.50	0.0050	0.5000	0	101	85	115			
Magnesium	56	1.0	50.00	0	112	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Potassium	54	1.0	50.00	0	108	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	56	1.0	50.00	0	112	85	115			
Zinc	0.49	0.010	0.5000	0	98.4	85	115			

Modifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3476		SampType:	MBLK		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	PBW		Batch ID:	3476		RunNo:	5311			
Prep Date:	8/24/2012		Analysis Date:	9/5/2012		SeqNo:	151201	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								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Silver	ND	0.0050								
Zinc	ND	0.010								

Sample ID	LCS-3476		SampType:	LCS		TestCode:	EPA Method 200.7: Total Metals			
Client ID:	LCSW		Batch ID:	3476		RunNo:	5311			
Prep Date:	8/24/2012		Analysis Date:	9/5/2012		SeqNo:	151202	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	101	85	115			
Copper	0.52	0.0060	0.5000	0	103	85	115			
Iron	0.51	0.020	0.5000	0	102	85	115			
Lead	0.51	0.0050	0.5000	0	101	85	115			
Manganese	0.50	0.0020	0.5000	0	99.3	85	115			
Silver	0.11	0.0050	0.1000	0	106	85	115			
Zinc	0.50	0.010	0.5000	0	99.8	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3476	SampType:	MBLK	TestCode:	EPA 200.8: Metals					
Client ID:	PBW	Batch ID:	3476	RunNo:	5508					
Prep Date:	8/24/2012	Analysis Date:	9/13/2012	SeqNo:	157390	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0025								

ifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208476-008EMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152349		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.029	0.0010	0.02500	0	117	70	130				

Sample ID	1208654-002AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152351		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.16	0.0050	0.1250	0.03618	99.4	70	130				

Sample ID	1208944-008AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152364		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0.0002792	97.9	70	130				
Selenium	0.029	0.0010	0.02500	0.004276	97.4	70	130				
Uranium	0.034	0.0010	0.02500	0.008442	103	70	130				

Sample ID	1208A83-002AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152381		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0	99.7	70	130				
Selenium	0.026	0.0010	0.02500	0.001591	98.2	70	130				
Uranium	0.027	0.0010	0.02500	0.0009453	103	70	130				

Sample ID	1208B35-001DMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152398		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.12	0.0050	0.1250	0.003821	93.6	70	130				
Selenium	0.11	0.0050	0.1250	0.007249	83.7	70	130				
Uranium	0.23	0.0050	0.1250	0.1005	107	70	130				

Sample ID	LCS	SampType:	LCS	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	LCSW	Batch ID:	R5350	RunNo:	5350					
Prep Date:		Analysis Date:	9/6/2012	SeqNo:	152416	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R5350		RunNo: 5350					
Prep Date:			Analysis Date: 9/6/2012		SeqNo: 152416		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.026	0.0010	0.02500	0	104	85	115			

Sample ID	LCS		SampType:	LCS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	LCSW		Batch ID:	R5350		RunNo:	5350				
Prep Date:			Analysis Date:	9/6/2012		SeqNo:	152417	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.025	0.0010	0.02500	0	102	85	115				
Selenium	0.026	0.0010	0.02500	0	103	85	115				
Uranium	0.024	0.0010	0.02500	0	97.0	85	115				

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5350	RunNo:	5350					
Prep Date:		Analysis Date:	9/6/2012	SeqNo:	152420	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	MB	SampType:	MBLK		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	PBW	Batch ID:	R5350		RunNo:	5350				
Prep Date:		Analysis Date:	9/6/2012		SeqNo:	152421	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Modifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3476		SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	PBW		Batch ID:	3476		RunNo:	5392			
Prep Date:	8/24/2012		Analysis Date:	9/6/2012		SeqNo:	153678		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								

Sample ID	MB-3476		SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total			
Client ID:	PBW		Batch ID:	3476		RunNo:	5508			
Prep Date:	8/24/2012		Analysis Date:	9/13/2012		SeqNo:	157423		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0025								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208988

all Environmental Analysis Laboratory, Inc.

26-Sep-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3670	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	3670	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155009	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-3670	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	3670	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155010	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.5	80	120			

Sample ID	1208722-005GMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3670	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155012	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	.00005024	96.8	75	125			

Sample ID	1208722-005GMSD	SampType:	MSD	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3670	RunNo:	5432					
Prep Date:	9/10/2012	Analysis Date:	9/11/2012	SeqNo:	155013	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	.00005024	97.6	75	125	0.862	20	

ifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142960	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142961	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	4.7	0.50	5.000	0	94.1	90	110			
Nitrogen, Nitrite (As N)	0.93	0.10	1.000	0	93.2	90	110			
Bromide	2.4	0.10	2.500	0	95.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	99.2	90	110			
Phosphorus, Orthophosphate (As P)	4.9	0.50	5.000	0	97.1	90	110			
Sulfate	9.4	0.50	10.00	0	93.7	90	110			

Sample ID	1208944-001AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142963	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Bromide	2.3	0.10	2.500	0.09490	89.1	83.3	107			
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Sample ID	1208944-001AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142964	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Bromide	2.4	0.10	2.500	0.09490	91.4	83.3	107	2.49	20	
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Sample ID	1208997-001DMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142985	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	19	0.50	5.000	13.63	107	87.8	111			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	93.6	72.5	111			
Bromide	2.5	0.10	2.500	0	98.8	83.3	107			
Nitrogen, Nitrate (As N)	2.9	0.10	2.500	0.3941	102	90.4	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 |
| P Sample pH greater than 2 | R RPD outside accepted recovery limits |

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208997-001DMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5046	RunNo:	5046					
Prep Date:		Analysis Date:	8/22/2012	SeqNo:	142986	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	19	0.50	5.000	13.63	108	87.8	111	0.271	20	
Nitrogen, Nitrite (As N)	0.95	0.10	1.000	0	94.7	72.5	111	1.20	20	
Bromide	2.5	0.10	2.500	0	100	83.3	107	1.16	20	
Nitrogen, Nitrate (As N)	3.0	0.10	2.500	0.3941	103	90.4	113	0.618	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5083	RunNo:	5083					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143987	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								

Sample ID	LCS-b	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R5083	RunNo:	5083					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143989	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.48	0.10	0.5000	0	95.8	90	110			

Sample ID	1208A33-004CMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5083	RunNo:	5083					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143990	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.2	0.50	2.500	0	89.7	76.6	110			

Sample ID	1208A33-004CMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5083	RunNo:	5083					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	143991	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2.2	0.50	2.500	0	87.9	76.6	110	2.06	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5107	RunNo:	5107					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144818	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								

Notes:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType:	LCS		TestCode:	EPA Method 300.0: Anions			
Client ID:	LCSW		Batch ID:	R5107		RunNo:	5107			
Prep Date:			Analysis Date:	8/24/2012		SeqNo:	144819		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	93.5	90	110			
Chloride	4.6	0.50	5.000	0	92.7	90	110			

Sample ID	1208A83-001AMS		SampType:	MS		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5107		RunNo:	5107			
Prep Date:			Analysis Date:	8/24/2012		SeqNo:	144823		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.6	0.10	0.5000	1.246	64.5	76.6	110			S
Chloride	9.4	0.50	5.000	4.464	97.9	87.8	111			

Sample ID	1208A83-001AMSD		SampType:	MSD		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5107		RunNo:	5107			
Prep Date:			Analysis Date:	8/24/2012		SeqNo:	144824		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.6	0.10	0.5000	1.246	63.4	76.6	110	0.342	20	S
Chloride	9.4	0.50	5.000	4.464	99.3	87.8	111	0.706	20	

Sample ID	1208A93-001AMS		SampType:	MS		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5107		RunNo:	5107			
Prep Date:			Analysis Date:	8/24/2012		SeqNo:	144835		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0.09428	79.8	76.6	110			

Sample ID	1208A93-001AMSD		SampType:	MSD		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5107		RunNo:	5107			
Prep Date:			Analysis Date:	8/24/2012		SeqNo:	144836		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0.09428	80.5	76.6	110	0.728	20	

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3460	SampType:	MBLK		TestCode:	EPA Method 8015B: Diesel Range				
Client ID:	PBW	Batch ID:	3460		RunNo:	5044				
Prep Date:	8/23/2012	Analysis Date:	8/23/2012		SeqNo:	143373	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	1.3		1.000		126	79.5	166			

Sample ID	LCS-3460		SampType: LCS		TestCode: EPA Method 8015B: Diesel Range					
Client ID:	LCSW		Batch ID: 3460		RunNo: 5044					
Prep Date:	8/23/2012		Analysis Date: 8/23/2012		SeqNo: 143388		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.2	1.0	5.000	0	84.0	74	157			
Surr: DNOP	0.51		0.5000		103	79.5	166			

Sample ID	LCSD-3460		SampType: LCSD		TestCode: EPA Method 8015B: Diesel Range					
Client ID:	LCSS02		Batch ID: 3460		RunNo: 5044					
Prep Date:	8/23/2012		Analysis Date: 8/23/2012		SeqNo: 143389		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	4.1	1.0	5.000	0	82.7	74	157	1.52	23	
Surr: DNOP	0.51		0.5000		102	79.5	166	0	0	

Modifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A18-001ADUP	SampType:	DUP	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R5086	RunNo:	5086					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	144171	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21000	500						3.09	21	
Surr: BFB	240000		200000		121	43.1	185	0	0	

Sample ID	1208A74-001ADUP	SampType:	DUP	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146146	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	2200	50						6.88	21	
Surr: BFB	68000		20000		342	43.1	185	0	0	S

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBW	Batch ID:	R5086	RunNo:	5086					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	144168	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	18		20.00		90.1	69.8	119			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSW	Batch ID:	R5086	RunNo:	5086					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	144169	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.45	0.050	0.5000	0	90.3	75.9	119			
Surr: BFB	23		20.00		113	69.8	119			

Sample ID	1208988-002AMS	SampType:	MS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	NAPIS-2	Batch ID:	R5086	RunNo:	5086					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	144177	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5.6	0.50	5.000	1.434	84.2	63.5	131			
Surr: BFB	230		200.0		114	69.8	119			

Sample ID	1208988-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	NAPIS-2	Batch ID:	R5086	RunNo:	5086					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	144178	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	5.5	0.50	5.000	1.434	80.9	63.5	131	2.91	16.7	
Surr: BFB	240		200.0		119	69.8	119	0	0	

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	PBW	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146142	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	22		20.00		111	69.8	119			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	LCSW	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146143	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.44	0.050	0.5000	0	87.9	75.9	119			
Surr: BFB	20		20.00		98.3	69.8	119			

Notes:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208989-001AMS		SampType:	MS		TestCode:	EPA Method 8015B: Gasoline Range				
Client ID:	BatchQC		Batch ID:	R5142		RunNo:	5142				
Prep Date:			Analysis Date:	8/27/2012		SeqNo:	146156		Units:		mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	4.7	0.50	5.000	0.2540	89.4	63.5	131				
Surr: BFB	190		200.0		97.3	69.8	119				

Sample ID	1208989-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015B: Gasoline Range					
Client ID:	BatchQC	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146157	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	4.7	0.50	5.000	0.2540	89.8	63.5	131	0.422	16.7	
Surr: BFB	220		200.0		111	69.8	119	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 |
| P Sample pH greater than 2 | R RPD outside accepted recovery limits |

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A74-001ADUP	SampType:	DUP	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146168	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	26		20.00		130	74.5	131	0	0	

fiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
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- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R5086	RunNo:	5086					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	144182	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	19		20.00		94.1	55	140			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R5086	RunNo:	5086					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	144183	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	19		20.00		94.0	55	140			

Sample ID	1208987-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5086	RunNo:	5086					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	144190	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	99		100.0		98.9	55	140			

Sample ID	1208987-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5086	RunNo:	5086					
Prep Date:		Analysis Date:	8/23/2012	SeqNo:	144191	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	110		100.0		105	55	140	0	0	

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBW	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146165	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	24		20.00		118	55	140			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSW	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146166	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	25		20.00		124	55	140			

Sample ID	1208B76-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146172	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	97		100.0		97.5	55	140			

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B76-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5142	RunNo:	5142					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146173	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	120		100.0		124	55	140	0	0	

ifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5105	RunNo:	5105					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144786	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								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

Qualifiers:

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- J Analyte detected below quantitation limits
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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5105	RunNo:	5105					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144786	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
1,1,2-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		100	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		101	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5105	RunNo:	5105					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144788	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	99.4	70	130			
Toluene	21	1.0	20.00	0	104	80	120			
Chlorobenzene	21	1.0	20.00	0	106	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	99.0	73.7	122			
Trichloroethene (TCE)	18	1.0	20.00	0	90.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.0	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		100	70	130			

ifiers:

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- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5105	RunNo:	5105					
Prep Date:		Analysis Date:	8/24/2012	SeqNo:	144788	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	10		10.00		100	70	130			
Surr: Toluene-d8	10		10.00		103	70	130			

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3477		SampType:	MBLK		TestCode:	EPA Method 8270C: Semivolatiles				
Client ID:	PBW		Batch ID:	3477		RunNo:	5155				
Prep Date:	8/24/2012		Analysis Date:	8/28/2012		SeqNo:	146454		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									
Bis(4-mophenyl 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									
2,4-Dinitrotoluene	ND	10									
2,6-Dinitrotoluene	ND	10									

ifiers:

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- ND Not Detected at the Reporting Limit
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3477	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3477	RunNo:	5155					
Prep Date:	8/24/2012	Analysis Date:	8/28/2012	SeqNo:	146454	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	20								
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: 2,4,6-Tribromophenol	110		200.0		55.0	44.2	126			
Surr: 2-Fluorobiphenyl	43		100.0		43.1	37	114			
Surr: 2-Fluorophenol	78		200.0		38.9	23.4	98			
Surr: 4-Terphenyl-d14	47		100.0		46.6	41.3	116			
Surr: Nitrobenzene-d5	45		100.0		44.9	39.5	118			
Surr: Phenol-d5	62		200.0		31.0	20.9	95.9			

Qualifiers:

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- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208988

26-Sep-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	lcs-3477		SampType:	LCS		TestCode:	EPA Method 8270C: Semivolatiles			
Client ID:	LCSW		Batch ID:	3477		RunNo:	5155			
Prep Date:	8/24/2012		Analysis Date:	8/28/2012		SeqNo:	146456		Units: µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	60	10	100.0	0	60.4	38.2	99.4			
4-Chloro-3-methylphenol	150	10	200.0	0	73.7	35.5	108			
2-Chlorophenol	120	10	200.0	0	58.5	29.8	106			
1,4-Dichlorobenzene	49	10	100.0	0	49.3	32.6	91.5			
2,4-Dinitrotoluene	67	10	100.0	0	67.2	44.7	112			
N-Nitrosodi-n-propylamine	72	10	100.0	0	71.5	38.5	105			
4-Nitrophenol	94	10	200.0	0	47.2	11.6	73.1			
Pentachlorophenol	130	20	200.0	0	63.4	20.2	93			
Phenol	94	10	200.0	0	47.1	23	66.1			
Pyrene	60	10	100.0	0	59.8	40.1	101			
1,2,4-Trichlorobenzene	52	10	100.0	0	52.3	37.7	99.1			
Surr: 2,4,6-Tribromophenol	170		200.0		87.2	44.2	126			
Surr: 2-Fluorobiphenyl	65		100.0		64.7	37	114			
Surr: 2-Fluorophenol	110		200.0		52.9	23.4	98			
Surr: 4-Terphenyl-d14	72		100.0		72.2	41.3	116			
Surr: Nitrobenzene-d5	61		100.0		60.5	39.5	118			
Surr: Phenol-d5	97		200.0		48.5	20.9	95.9			

Sample ID	lcsd-3477		SampType:	LCSD		TestCode:	EPA Method 8270C: Semivolatiles			
Client ID:	LCSS02		Batch ID:	3477		RunNo:	5155			
Prep Date:	8/24/2012		Analysis Date:	8/28/2012		SeqNo:	146458		Units: µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	65	10	100.0	0	65.1	38.2	99.4	7.42	20	
4-Chloro-3-methylphenol	150	10	200.0	0	76.2	35.5	108	3.38	20	
2-Chlorophenol	120	10	200.0	0	61.2	29.8	106	4.43	20	
1,4-Dichlorobenzene	50	10	100.0	0	50.1	32.6	91.5	1.61	20	
2,4-Dinitrotoluene	80	10	100.0	0	80.0	44.7	112	17.4	20	
N-Nitrosodi-n-propylamine	69	10	100.0	0	69.5	38.5	105	2.89	20	
4-Nitrophenol	110	10	200.0	0	55.7	11.6	73.1	16.4	20	
Pentachlorophenol	150	20	200.0	0	73.7	20.2	93	15.1	20	
Phenol	93	10	200.0	0	46.5	23	66.1	1.37	20	
Pyrene	65	10	100.0	0	65.1	40.1	101	8.43	20	
1,2,4-Trichlorobenzene	59	10	100.0	0	58.7	37.7	99.1	11.4	20	
Surr: 2,4,6-Tribromophenol	180		200.0		92.0	44.2	126	0	0	
Surr: 2-Fluorobiphenyl	69		100.0		69.3	37	114	0	0	
Surr: 2-Fluorophenol	110		200.0		52.6	23.4	98	0	0	
Surr: 4-Terphenyl-d14	75		100.0		75.1	41.3	116	0	0	
Surr: Nitrobenzene-d5	68		100.0		68.5	39.5	118	0	0	
Surr: Phenol-d5	92		200.0		46.2	20.9	95.9	0	0	

ifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87105
TEL: 505-345-3975 FAX: 505-345-4101
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Western Refining Gallup

Work Order Number: 1208988

Received by/date: AT 08/22/12

Logged By: Anne Thorne

8/22/2012 1:22:00 PM

Anne Thorne

Completed By: Anne Thorne

8/22/2012

Anne Thorne

Reviewed By: IO 08/23/12

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☒ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. VOA vials have zero headspace? Yes ☒ No ☐ No VOA Vials ☐
12. Were any sample containers received broken? Yes ☒ No ☐
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 9
(<2 or >12 unless noted)
Adjusted?
Checked by: *[Signature]*

Special Handling (if applicable)

17. 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:	_____		

18. Additional remarks:

19. Cooler Information

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

**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

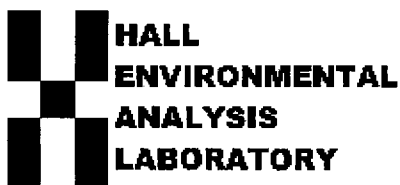
Tel. 505-345-3975 **Fax 505-345-4107**

Analysis Request

[illegible]

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
12/12	0830	<i>[Signature]</i>	<i>[Signature]</i>			
Date:	Time:	Relinquished by:	Received by:	Date	Time	
22/12	13:22	<i>[Signature]</i>	<i>[Signature]</i>	08/22/12	1322	N/O TB / A-08/22/12-

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



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

October 01, 2012

Cheryl Johnson

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-0231

FAX (505) 722-0210

RE: 3rd QTR 2012 Groundwater Sampling

OrderNo.: 1208B37

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory received 8 sample(s) on 8/24/2012 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. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated. 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.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical ReportLab Order **1208B37**Date Reported: **10/1/2012****Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** OW-13**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/23/2012 12:00:00 PM**Lab ID:** 1208B37-001**Matrix:** AQUEOUS**Received Date:** 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/28/2012 5:52:54 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 5:52:54 AM
Surr: DNOP	134	79.5-166		%REC	1	8/28/2012 5:52:54 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/30/2012 1:46:50 PM
Surr: BFB	95.6	69.8-119		%REC	1	8/30/2012 1:46:50 PM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.25	0.10		mg/L	1	8/27/2012 7:06:01 PM
Chloride	27	10		mg/L	20	8/27/2012 7:43:16 PM
Bromide	0.35	0.10		mg/L	1	8/27/2012 7:06:01 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/27/2012 7:06:01 PM
Sulfate	150	10		mg/L	20	8/27/2012 7:43:16 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/28/2012 12:06:40 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.022	0.0020		mg/L	1	9/12/2012 8:49:02 PM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 8:49:02 PM
Calcium	8.5	1.0		mg/L	1	9/12/2012 8:49:02 PM
Chromium	ND	0.0060		mg/L	1	9/12/2012 8:49:02 PM
Copper	ND	0.0060		mg/L	1	9/12/2012 8:49:02 PM
Iron	ND	0.020		mg/L	1	9/12/2012 8:49:02 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 8:49:02 PM
Magnesium	1.3	1.0		mg/L	1	9/12/2012 8:49:02 PM
Manganese	0.011	0.0020		mg/L	1	9/12/2012 8:49:02 PM
Potassium	1.2	1.0		mg/L	1	9/12/2012 8:49:02 PM
Silver	ND	0.0050		mg/L	1	9/12/2012 8:49:02 PM
Sodium	300	5.0		mg/L	5	9/12/2012 8:53:00 PM
Zinc	0.016	0.010		mg/L	1	9/12/2012 8:49:02 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.024	0.0020		mg/L	1	9/11/2012 11:40:17 AM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 11:40:17 AM
Chromium	ND	0.0060		mg/L	1	9/11/2012 11:40:17 AM
Copper	ND	0.0060		mg/L	1	9/11/2012 11:40:17 AM
Iron	ND	0.020		mg/L	1	9/11/2012 11:40:17 AM
Lead	ND	0.0050		mg/L	1	9/11/2012 11:40:17 AM
Manganese	0.010	0.0020		mg/L	1	9/11/2012 11:40:17 AM
Silver	ND	0.0050		mg/L	1	9/11/2012 11:40:17 AM
Zinc	ND	0.010		mg/L	1	9/11/2012 11:40:17 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	ND	0.0010		mg/L	1	9/11/2012 12:28:36 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-13

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 12:00:00 PM

Lab ID: 1208B37-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Selenium	ND	0.0010		mg/L	1	9/11/2012 12:28:36 PM
Uranium	0.016	0.0010		mg/L	1	9/11/2012 12:28:36 PM
200.8 ICPMS METALS: TOTAL						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 6:11:47 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:11:47 PM
Uranium	0.017	0.0025		mg/L	2.5	9/13/2012 1:47:06 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:07:13 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Toluene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Ethylbenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Methyl tert-butyl ether (MTBE)	9.2	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Naphthalene	ND	2.0		µg/L	1	8/31/2012 7:35:13 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 7:35:13 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 7:35:13 PM
Acetone	ND	10		µg/L	1	8/31/2012 7:35:13 PM
Bromobenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Bromoform	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Bromomethane	ND	3.0		µg/L	1	8/31/2012 7:35:13 PM
2-Butanone	ND	10		µg/L	1	8/31/2012 7:35:13 PM
Carbon disulfide	ND	10		µg/L	1	8/31/2012 7:35:13 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Chlorobenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Chloroethane	ND	2.0		µg/L	1	8/31/2012 7:35:13 PM
Chloroform	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Chloromethane	ND	3.0		µg/L	1	8/31/2012 7:35:13 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/31/2012 7:35:13 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Dibromomethane	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-13

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 12:00:00 PM

Lab ID: 1208B37-001

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/31/2012 7:35:13 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
2-Hexanone	ND	10		µg/L	1	8/31/2012 7:35:13 PM
Isopropylbenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/31/2012 7:35:13 PM
Methylene Chloride	ND	3.0		µg/L	1	8/31/2012 7:35:13 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/31/2012 7:35:13 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Styrene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/31/2012 7:35:13 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/31/2012 7:35:13 PM
Vinyl chloride	ND	1.0		µg/L	1	8/31/2012 7:35:13 PM
Xylenes, Total	ND	1.5		µg/L	1	8/31/2012 7:35:13 PM
Surr: 1,2-Dichloroethane-d4	83.0	70-130		%REC	1	8/31/2012 7:35:13 PM
Surr: 4-Bromofluorobenzene	87.2	70-130		%REC	1	8/31/2012 7:35:13 PM
Surr: Dibromofluoromethane	84.8	70-130		%REC	1	8/31/2012 7:35:13 PM
Surr: Toluene-d8	81.5	70-130		%REC	1	8/31/2012 7:35:13 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-14

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 12:15:00 PM

Lab ID: 1208B37-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	2.4	1.0		mg/L	1	8/28/2012 6:14:30 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 6:14:30 AM
Surr: DNOP	134	79.5-166		%REC	1	8/28/2012 6:14:30 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	15	0.50		mg/L	10	8/30/2012 1:33:13 AM
Surr: BFB	112	69.8-119		%REC	10	8/30/2012 1:33:13 AM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	ND	0.50		mg/L	5	8/27/2012 7:55:41 PM
Chloride	410	25		mg/L	50	9/5/2012 8:43:21 PM
Bromide	2.7	0.50		mg/L	5	8/27/2012 7:55:41 PM
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	8/27/2012 7:55:41 PM
Sulfate	3.5	2.5		mg/L	5	8/27/2012 7:55:41 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/28/2012 12:19:05 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	1.1	0.010		mg/L	5	9/12/2012 8:59:54 PM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 8:56:44 PM
Calcium	98	1.0		mg/L	1	9/12/2012 8:56:44 PM
Chromium	ND	0.0060		mg/L	1	9/12/2012 8:56:44 PM
Copper	ND	0.0060		mg/L	1	9/12/2012 8:56:44 PM
Iron	4.4	0.10	*	mg/L	5	9/12/2012 8:59:54 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 8:56:44 PM
Magnesium	28	1.0		mg/L	1	9/12/2012 8:56:44 PM
Manganese	2.3	0.010	*	mg/L	5	9/12/2012 8:59:54 PM
Potassium	ND	1.0		mg/L	1	9/12/2012 8:56:44 PM
Silver	ND	0.0050		mg/L	1	9/12/2012 8:56:44 PM
Sodium	430	5.0		mg/L	5	9/12/2012 8:59:54 PM
Zinc	0.039	0.010		mg/L	1	9/12/2012 8:56:44 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	1.2	0.010		mg/L	5	9/11/2012 1:15:20 PM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 11:43:56 AM
Chromium	ND	0.0060		mg/L	1	9/11/2012 11:43:56 AM
Copper	ND	0.0060		mg/L	1	9/11/2012 11:43:56 AM
Iron	4.2	0.10	*	mg/L	5	9/11/2012 1:15:20 PM
Lead	ND	0.0050		mg/L	1	9/11/2012 11:43:56 AM
Manganese	2.3	0.010	*	mg/L	5	9/11/2012 1:15:20 PM
Silver	ND	0.0050		mg/L	1	9/11/2012 11:43:56 AM
Zinc	ND	0.010		mg/L	1	9/11/2012 11:43:56 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.010	0.0010	*	mg/L	1	9/11/2012 12:32:32 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-14

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 12:15:00 PM

Lab ID: 1208B37-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Selenium	0.0067	0.0010		mg/L	1	9/11/2012 12:32:32 PM
Uranium	0.0091	0.0010		mg/L	1	9/11/2012 12:32:32 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	0.012	0.0025	*	mg/L	2.5	9/6/2012 6:13:47 PM
Selenium	0.0066	0.0025		mg/L	2.5	9/26/2012 11:04:23 AM
Uranium	0.0095	0.0025		mg/L	2.5	9/13/2012 1:48:58 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:09:00 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	2100	50		µg/L	50	8/31/2012 8:02:48 PM
Toluene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Ethylbenzene	37	10		µg/L	10	8/31/2012 8:30:24 PM
Methyl tert-butyl ether (MTBE)	1600	10		µg/L	10	8/31/2012 8:30:24 PM
1,2,4-Trimethylbenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,3,5-Trimethylbenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Naphthalene	ND	20		µg/L	10	8/31/2012 8:30:24 PM
1-Methylnaphthalene	ND	40		µg/L	10	8/31/2012 8:30:24 PM
2-Methylnaphthalene	ND	40		µg/L	10	8/31/2012 8:30:24 PM
Acetone	ND	100		µg/L	10	8/31/2012 8:30:24 PM
Bromobenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Bromodichloromethane	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Bromoform	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Bromomethane	ND	30		µg/L	10	8/31/2012 8:30:24 PM
2-Butanone	ND	100		µg/L	10	8/31/2012 8:30:24 PM
Carbon disulfide	ND	100		µg/L	10	8/31/2012 8:30:24 PM
Carbon Tetrachloride	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Chlorobenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Chloroethane	ND	20		µg/L	10	8/31/2012 8:30:24 PM
Chloroform	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Chloromethane	ND	30		µg/L	10	8/31/2012 8:30:24 PM
2-Chlorotoluene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
4-Chlorotoluene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
cis-1,2-DCE	ND	10		µg/L	10	8/31/2012 8:30:24 PM
cis-1,3-Dichloropropene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	8/31/2012 8:30:24 PM
Dibromochloromethane	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Dibromomethane	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,2-Dichlorobenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-14

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 12:15:00 PM

Lab ID: 1208B37-002

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,3-Dichlorobenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,4-Dichlorobenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Dichlorodifluoromethane	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,1-Dichloroethane	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,1-Dichloroethene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,2-Dichloropropane	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,3-Dichloropropane	ND	10		µg/L	10	8/31/2012 8:30:24 PM
2,2-Dichloropropane	ND	20		µg/L	10	8/31/2012 8:30:24 PM
1,1-Dichloropropene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Hexachlorobutadiene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
2-Hexanone	ND	100		µg/L	10	8/31/2012 8:30:24 PM
Isopropylbenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
4-Isopropyltoluene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
4-Methyl-2-pentanone	ND	100		µg/L	10	8/31/2012 8:30:24 PM
Methylene Chloride	ND	30		µg/L	10	8/31/2012 8:30:24 PM
n-Butylbenzene	ND	30		µg/L	10	8/31/2012 8:30:24 PM
n-Propylbenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
sec-Butylbenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Styrene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
tert-Butylbenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	8/31/2012 8:30:24 PM
Tetrachloroethene (PCE)	ND	10		µg/L	10	8/31/2012 8:30:24 PM
trans-1,2-DCE	ND	10		µg/L	10	8/31/2012 8:30:24 PM
trans-1,3-Dichloropropene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,2,3-Trichlorobenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,1,1-Trichloroethane	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,1,2-Trichloroethane	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Trichloroethene (TCE)	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Trichlorofluoromethane	ND	10		µg/L	10	8/31/2012 8:30:24 PM
1,2,3-Trichloropropane	ND	20		µg/L	10	8/31/2012 8:30:24 PM
Vinyl chloride	ND	10		µg/L	10	8/31/2012 8:30:24 PM
Xylenes, Total	ND	15		µg/L	10	8/31/2012 8:30:24 PM
Surr: 1,2-Dichloroethane-d4	82.9	70-130		%REC	10	8/31/2012 8:30:24 PM
Surr: 4-Bromofluorobenzene	84.8	70-130		%REC	10	8/31/2012 8:30:24 PM
Surr: Dibromofluoromethane	88.3	70-130		%REC	10	8/31/2012 8:30:24 PM
Surr: Toluene-d8	82.5	70-130		%REC	10	8/31/2012 8:30:24 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-29

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 12:30:00 PM

Lab ID: 1208B37-003

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/28/2012 6:36:08 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 6:36:08 AM
Surr: DNOP	138	79.5-166		%REC	1	8/28/2012 6:36:08 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	0.90	0.050		mg/L	1	8/30/2012 2:01:56 AM
Surr: BFB	97.9	69.8-119		%REC	1	8/30/2012 2:01:56 AM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.37	0.10		mg/L	1	8/27/2012 8:20:31 PM
Chloride	140	10		mg/L	20	8/27/2012 8:32:56 PM
Bromide	0.74	0.10		mg/L	1	8/27/2012 8:20:31 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/27/2012 8:20:31 PM
Sulfate	83	10		mg/L	20	8/27/2012 8:32:56 PM
Nitrate+Nitrite as N	1.0	1.0		mg/L	5	8/28/2012 12:31:29 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.056	0.0020		mg/L	1	9/12/2012 9:22:10 PM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 9:22:10 PM
Calcium	50	1.0		mg/L	1	9/12/2012 9:22:10 PM
Chromium	ND	0.0060		mg/L	1	9/12/2012 9:22:10 PM
Copper	ND	0.0060		mg/L	1	9/12/2012 9:22:10 PM
Iron	0.046	0.020		mg/L	1	9/12/2012 9:22:10 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 9:22:10 PM
Magnesium	12	1.0		mg/L	1	9/12/2012 9:22:10 PM
Manganese	0.24	0.0020	*	mg/L	1	9/12/2012 9:22:10 PM
Potassium	ND	1.0		mg/L	1	9/12/2012 9:22:10 PM
Silver	ND	0.0050		mg/L	1	9/12/2012 9:22:10 PM
Sodium	360	5.0		mg/L	5	9/12/2012 9:25:58 PM
Zinc	ND	0.010		mg/L	1	9/12/2012 9:22:10 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.058	0.0020		mg/L	1	9/11/2012 11:54:59 AM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 11:54:59 AM
Chromium	ND	0.0060		mg/L	1	9/11/2012 11:54:59 AM
Copper	ND	0.0060		mg/L	1	9/11/2012 11:54:59 AM
Iron	0.16	0.020		mg/L	1	9/11/2012 11:54:59 AM
Lead	ND	0.0050		mg/L	1	9/11/2012 11:54:59 AM
Manganese	0.25	0.0020	*	mg/L	1	9/11/2012 11:54:59 AM
Silver	ND	0.0050		mg/L	1	9/11/2012 11:54:59 AM
Zinc	ND	0.010		mg/L	1	9/11/2012 11:54:59 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0010	0.0010		mg/L	1	9/11/2012 12:36:28 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						
						Analyst: DBD
Selenium	0.0019	0.0010		mg/L	1	9/11/2012 12:36:28 PM
Uranium	0.053	0.0050	*	mg/L	5	9/11/2012 3:13:56 PM
200.8 ICPMS METALS:TOTAL						
						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 6:15:39 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:15:39 PM
Uranium	0.055	0.0025	*	mg/L	2.5	9/13/2012 1:50:50 PM
EPA METHOD 245.1: MERCURY						
						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:10:48 AM
EPA METHOD 8260B: VOLATILES						
						Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Toluene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Ethylbenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Methyl tert-butyl ether (MTBE)	1000	10		µg/L	10	9/4/2012 10:58:24 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Naphthalene	ND	2.0		µg/L	1	8/31/2012 8:57:59 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 8:57:59 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 8:57:59 PM
Acetone	ND	10		µg/L	1	8/31/2012 8:57:59 PM
Bromobenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Bromoform	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Bromomethane	ND	3.0		µg/L	1	8/31/2012 8:57:59 PM
2-Butanone	ND	10		µg/L	1	8/31/2012 8:57:59 PM
Carbon disulfide	ND	10		µg/L	1	8/31/2012 8:57:59 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Chlorobenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Chloroethane	ND	2.0		µg/L	1	8/31/2012 8:57:59 PM
Chloroform	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Chloromethane	ND	3.0		µg/L	1	8/31/2012 8:57:59 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/31/2012 8:57:59 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Dibromomethane	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM

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EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/31/2012 8:57:59 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
2-Hexanone	ND	10		µg/L	1	8/31/2012 8:57:59 PM
Isopropylbenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/31/2012 8:57:59 PM
Methylene Chloride	ND	3.0		µg/L	1	8/31/2012 8:57:59 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/31/2012 8:57:59 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Styrene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/31/2012 8:57:59 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/31/2012 8:57:59 PM
Vinyl chloride	ND	1.0		µg/L	1	8/31/2012 8:57:59 PM
Xylenes, Total	ND	1.5		µg/L	1	8/31/2012 8:57:59 PM
Surr: 1,2-Dichloroethane-d4	83.0	70-130		%REC	1	8/31/2012 8:57:59 PM
Surr: 4-Bromofluorobenzene	88.7	70-130		%REC	1	8/31/2012 8:57:59 PM
Surr: Dibromofluoromethane	82.5	70-130		%REC	1	8/31/2012 8:57:59 PM
Surr: Toluene-d8	83.4	70-130		%REC	1	8/31/2012 8:57:59 PM

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Client Sample ID: OW-30

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Collection Date: 8/23/2012 11:20:00 AM

Lab ID: 1208B37-004

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/28/2012 7:19:28 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 7:19:28 AM
Surr: DNOP	141	79.5-166		%REC	1	8/28/2012 7:19:28 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1.8	0.050		mg/L	1	8/30/2012 2:30:35 AM
Surr: BFB	96.5	69.8-119		%REC	1	8/30/2012 2:30:35 AM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.31	0.10		mg/L	1	8/27/2012 9:10:10 PM
Chloride	140	10		mg/L	20	8/27/2012 9:22:35 PM
Bromide	0.35	0.10		mg/L	1	8/27/2012 9:10:10 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/27/2012 9:10:10 PM
Sulfate	53	10		mg/L	20	8/27/2012 9:22:35 PM
Nitrate+Nitrite as N	1.5	1.0		mg/L	5	8/28/2012 1:21:09 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.074	0.0020		mg/L	1	9/12/2012 9:29:43 PM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 9:29:43 PM
Calcium	61	1.0		mg/L	1	9/12/2012 9:29:43 PM
Chromium	ND	0.0060		mg/L	1	9/12/2012 9:29:43 PM
Copper	ND	0.0060		mg/L	1	9/12/2012 9:29:43 PM
Iron	ND	0.020		mg/L	1	9/12/2012 9:29:43 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 9:29:43 PM
Magnesium	14	1.0		mg/L	1	9/12/2012 9:29:43 PM
Manganese	0.015	0.0020		mg/L	1	9/12/2012 9:29:43 PM
Potassium	ND	1.0		mg/L	1	9/12/2012 9:29:43 PM
Silver	ND	0.0050		mg/L	1	9/12/2012 9:29:43 PM
Sodium	370	5.0		mg/L	5	9/12/2012 9:33:31 PM
Zinc	0.036	0.010		mg/L	1	9/12/2012 9:29:43 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.078	0.0020		mg/L	1	9/11/2012 11:58:41 AM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 11:58:41 AM
Chromium	ND	0.0060		mg/L	1	9/11/2012 11:58:41 AM
Copper	ND	0.0060		mg/L	1	9/11/2012 11:58:41 AM
Iron	0.058	0.020		mg/L	1	9/11/2012 11:58:41 AM
Lead	ND	0.0050		mg/L	1	9/11/2012 11:58:41 AM
Manganese	0.018	0.0020		mg/L	1	9/11/2012 11:58:41 AM
Silver	ND	0.0050		mg/L	1	9/11/2012 11:58:41 AM
Zinc	ND	0.010		mg/L	1	9/11/2012 11:58:41 AM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0010	0.0010		mg/L	1	9/11/2012 12:40:24 PM

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Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Selenium	0.0017	0.0010		mg/L	1	9/11/2012 12:40:24 PM
Uranium	0.052	0.0050	*	mg/L	5	9/11/2012 3:25:49 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 6:17:31 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:17:31 PM
Uranium	0.056	0.0025	*	mg/L	2.5	9/13/2012 1:52:42 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:12:36 AM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Toluene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Ethylbenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Methyl tert-butyl ether (MTBE)	2300	50		µg/L	50	9/4/2012 11:26:02 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Naphthalene	ND	2.0		µg/L	1	8/31/2012 11:43:50 PM
1-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 11:43:50 PM
2-Methylnaphthalene	ND	4.0		µg/L	1	8/31/2012 11:43:50 PM
Acetone	ND	10		µg/L	1	8/31/2012 11:43:50 PM
Bromobenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Bromodichloromethane	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Bromoform	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Bromomethane	ND	3.0		µg/L	1	8/31/2012 11:43:50 PM
2-Butanone	ND	10		µg/L	1	8/31/2012 11:43:50 PM
Carbon disulfide	ND	10		µg/L	1	8/31/2012 11:43:50 PM
Carbon Tetrachloride	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Chlorobenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Chloroethane	ND	2.0		µg/L	1	8/31/2012 11:43:50 PM
Chloroform	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Chloromethane	ND	3.0		µg/L	1	8/31/2012 11:43:50 PM
2-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
4-Chlorotoluene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
cis-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	8/31/2012 11:43:50 PM
Dibromochloromethane	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Dibromomethane	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM

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EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,3-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
2,2-Dichloropropane	ND	2.0		µg/L	1	8/31/2012 11:43:50 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
2-Hexanone	ND	10		µg/L	1	8/31/2012 11:43:50 PM
Isopropylbenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	8/31/2012 11:43:50 PM
Methylene Chloride	ND	3.0		µg/L	1	8/31/2012 11:43:50 PM
n-Butylbenzene	ND	3.0		µg/L	1	8/31/2012 11:43:50 PM
n-Propylbenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
sec-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Styrene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
tert-Butylbenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	8/31/2012 11:43:50 PM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
trans-1,2-DCE	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Trichloroethene (TCE)	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	8/31/2012 11:43:50 PM
Vinyl chloride	ND	1.0		µg/L	1	8/31/2012 11:43:50 PM
Xylenes, Total	ND	1.5		µg/L	1	8/31/2012 11:43:50 PM
Surr: 1,2-Dichloroethane-d4	84.1	70-130		%REC	1	8/31/2012 11:43:50 PM
Surr: 4-Bromofluorobenzene	85.0	70-130		%REC	1	8/31/2012 11:43:50 PM
Surr: Dibromofluoromethane	86.6	70-130		%REC	1	8/31/2012 11:43:50 PM
Surr: Toluene-d8	82.5	70-130		%REC	1	8/31/2012 11:43:50 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Western Refining Southwest, Gallup**Client Sample ID:** OW-50**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/23/2012 1:10:00 PM**Lab ID:** 1208B37-005**Matrix:** AQUEOUS**Received Date:** 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/28/2012 7:40:57 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 7:40:57 AM
Surr: DNOP	142	79.5-166		%REC	1	8/28/2012 7:40:57 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/30/2012 2:59:26 AM
Surr: BFB	96.2	69.8-119		%REC	1	8/30/2012 2:59:26 AM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.42	0.10		mg/L	1	8/27/2012 9:35:00 PM
Chloride	26	10		mg/L	20	8/27/2012 9:47:24 PM
Bromide	0.22	0.10		mg/L	1	8/27/2012 9:35:00 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/27/2012 9:35:00 PM
Sulfate	140	10		mg/L	20	8/27/2012 9:47:24 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/28/2012 1:33:34 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.040	0.0020		mg/L	1	9/12/2012 9:37:15 PM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 9:37:15 PM
Calcium	22	1.0		mg/L	1	9/12/2012 9:37:15 PM
Chromium	ND	0.0060		mg/L	1	9/12/2012 9:37:15 PM
Copper	ND	0.0060		mg/L	1	9/12/2012 9:37:15 PM
Iron	ND	0.020		mg/L	1	9/12/2012 9:37:15 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 9:37:15 PM
Magnesium	3.7	1.0		mg/L	1	9/12/2012 9:37:15 PM
Manganese	0.051	0.0020	*	mg/L	1	9/12/2012 9:37:15 PM
Potassium	ND	1.0		mg/L	1	9/12/2012 9:37:15 PM
Silver	ND	0.0050		mg/L	1	9/12/2012 9:37:15 PM
Sodium	230	5.0		mg/L	5	9/12/2012 9:42:59 PM
Zinc	0.014	0.010		mg/L	1	9/12/2012 9:37:15 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.043	0.0020		mg/L	1	9/11/2012 12:13:54 PM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 12:13:54 PM
Chromium	ND	0.0060		mg/L	1	9/11/2012 12:13:54 PM
Copper	0.0086	0.0060		mg/L	1	9/11/2012 12:13:54 PM
Iron	0.071	0.020		mg/L	1	9/11/2012 12:13:54 PM
Lead	ND	0.0050		mg/L	1	9/11/2012 12:13:54 PM
Manganese	0.058	0.0020	*	mg/L	1	9/11/2012 12:13:54 PM
Silver	ND	0.0050		mg/L	1	9/11/2012 12:13:54 PM
Zinc	0.011	0.010		mg/L	1	9/11/2012 12:13:54 PM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	0.0019	0.0010		mg/L	1	9/11/2012 12:44:20 PM

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- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-50

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 1:10:00 PM

Lab ID: 1208B37-005

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						
						Analyst: DBD
Selenium	ND	0.0010		mg/L	1	9/11/2012 12:44:20 PM
Uranium	0.0077	0.0010		mg/L	1	9/11/2012 12:44:20 PM
200.8 ICPMS METALS:TOTAL						
						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 6:19:23 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:19:23 PM
Uranium	0.0080	0.0025		mg/L	2.5	9/13/2012 1:54:34 PM
EPA METHOD 245.1: MERCURY						
						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:14:22 AM
EPA METHOD 8270C: SEMIVOLATILES						
						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Acenaphthylene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Aniline	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Anthracene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Azobenzene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Benz(a)anthracene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Benzoic acid	ND	20		µg/L	1	8/31/2012 2:34:31 PM
Benzyl alcohol	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/31/2012 2:34:31 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Carbazole	ND	10		µg/L	1	8/31/2012 2:34:31 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/31/2012 2:34:31 PM
4-Chloroaniline	ND	10		µg/L	1	8/31/2012 2:34:31 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
2-Chlorophenol	ND	10		µg/L	1	8/31/2012 2:34:31 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Chrysene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Dibenzofuran	ND	10		µg/L	1	8/31/2012 2:34:31 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 2:34:31 PM

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- P Sample pH greater than 2
- RL Reporting Detection Limit

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- ND Not Detected at the Reporting Limit
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Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-50

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 1:10:00 PM

Lab ID: 1208B37-005

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Diethyl phthalate	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Dimethyl phthalate	ND	10		µg/L	1	8/31/2012 2:34:31 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/31/2012 2:34:31 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/31/2012 2:34:31 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/31/2012 2:34:31 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/31/2012 2:34:31 PM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Fluoranthene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Fluorene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Hexachlorobenzene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Hexachloroethane	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Isophorone	ND	10		µg/L	1	8/31/2012 2:34:31 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
2-Methylphenol	ND	10		µg/L	1	8/31/2012 2:34:31 PM
3+4-Methylphenol	ND	10		µg/L	1	8/31/2012 2:34:31 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/31/2012 2:34:31 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/31/2012 2:34:31 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Naphthalene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
2-Nitroaniline	ND	10		µg/L	1	8/31/2012 2:34:31 PM
3-Nitroaniline	ND	10		µg/L	1	8/31/2012 2:34:31 PM
4-Nitroaniline	ND	20		µg/L	1	8/31/2012 2:34:31 PM
Nitrobenzene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
2-Nitrophenol	ND	10		µg/L	1	8/31/2012 2:34:31 PM
4-Nitrophenol	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Pentachlorophenol	ND	20		µg/L	1	8/31/2012 2:34:31 PM
Phenanthrene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Phenol	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Pyrene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Pyridine	ND	10		µg/L	1	8/31/2012 2:34:31 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/31/2012 2:34:31 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/31/2012 2:34:31 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/31/2012 2:34:31 PM
Surr: 2,4,6-Tribromophenol	76.3	44.2-126		%REC	1	8/31/2012 2:34:31 PM
Surr: 2-Fluorobiphenyl	57.7	37-114		%REC	1	8/31/2012 2:34:31 PM

Qualifiers:

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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-50

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 1:10:00 PM

Lab ID: 1208B37-005

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorophenol	42.9	23.4-98		%REC	1	8/31/2012 2:34:31 PM
Surr: 4-Terphenyl-d14	56.1	41.3-116		%REC	1	8/31/2012 2:34:31 PM
Surr: Nitrobenzene-d5	49.6	39.5-118		%REC	1	8/31/2012 2:34:31 PM
Surr: Phenol-d5	32.6	20.9-95.9		%REC	1	8/31/2012 2:34:31 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Toluene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Ethylbenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Naphthalene	ND	2.0		µg/L	1	9/1/2012 12:39:01 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 12:39:01 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 12:39:01 AM
Acetone	ND	10		µg/L	1	9/1/2012 12:39:01 AM
Bromobenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Bromoform	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Bromomethane	ND	3.0		µg/L	1	9/1/2012 12:39:01 AM
2-Butanone	ND	10		µg/L	1	9/1/2012 12:39:01 AM
Carbon disulfide	ND	10		µg/L	1	9/1/2012 12:39:01 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Chlorobenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Chloroethane	ND	2.0		µg/L	1	9/1/2012 12:39:01 AM
Chloroform	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Chloromethane	ND	3.0		µg/L	1	9/1/2012 12:39:01 AM
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2012 12:39:01 AM
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Dibromomethane	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM

Qualifiers:

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- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
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Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-50

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 1:10:00 PM

Lab ID: 1208B37-005

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2012 12:39:01 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
2-Hexanone	ND	10		µg/L	1	9/1/2012 12:39:01 AM
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2012 12:39:01 AM
Methylene Chloride	ND	3.0		µg/L	1	9/1/2012 12:39:01 AM
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2012 12:39:01 AM
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Styrene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2012 12:39:01 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2012 12:39:01 AM
Vinyl chloride	ND	1.0		µg/L	1	9/1/2012 12:39:01 AM
Xylenes, Total	ND	1.5		µg/L	1	9/1/2012 12:39:01 AM
Surr: 1,2-Dichloroethane-d4	84.2	70-130		%REC	1	9/1/2012 12:39:01 AM
Surr: 4-Bromofluorobenzene	84.7	70-130		%REC	1	9/1/2012 12:39:01 AM
Surr: Dibromofluoromethane	88.1	70-130		%REC	1	9/1/2012 12:39:01 AM
Surr: Toluene-d8	82.9	70-130		%REC	1	9/1/2012 12:39:01 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: IDC
Conductivity	1100	0.010		µmhos/cm	1	8/28/2012 1:31:13 PM
SM4500-H+B: PH						Analyst: IDC
pH	8.13	1.68	H	pH units	1	8/28/2012 1:31:13 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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

Lab Order 1208B37

Date Reported: 10/1/2012

CLIENT: Western Refining Southwest, Gallup**Client Sample ID:** OW-52**Project:** 3rd QTR 2012 Groundwater Sampling**Collection Date:** 8/23/2012 12:50:00 PM**Lab ID:** 1208B37-006**Matrix:** AQUEOUS**Received Date:** 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: JMP
Diesel Range Organics (DRO)	ND	1.0		mg/L	1	8/28/2012 8:02:41 AM
Motor Oil Range Organics (MRO)	ND	5.0		mg/L	1	8/28/2012 8:02:41 AM
Surr: DNOP	140	79.5-166		%REC	1	8/28/2012 8:02:41 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	8/30/2012 3:28:15 AM
Surr: BFB	95.6	69.8-119		%REC	1	8/30/2012 3:28:15 AM
EPA METHOD 300.0: ANIONS						Analyst: SRM
Fluoride	0.49	0.10		mg/L	1	8/27/2012 9:59:50 PM
Chloride	25	10		mg/L	20	8/27/2012 10:12:14 PM
Bromide	0.16	0.10		mg/L	1	8/27/2012 9:59:50 PM
Phosphorus, Orthophosphate (As P)	ND	0.50	H	mg/L	1	8/27/2012 9:59:50 PM
Sulfate	120	10		mg/L	20	8/27/2012 10:12:14 PM
Nitrate+Nitrite as N	ND	1.0		mg/L	5	8/28/2012 1:45:59 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: ELS
Barium	0.022	0.0020		mg/L	1	9/12/2012 9:46:43 PM
Cadmium	ND	0.0020		mg/L	1	9/12/2012 9:46:43 PM
Calcium	4.4	1.0		mg/L	1	9/12/2012 9:46:43 PM
Chromium	ND	0.0060		mg/L	1	9/12/2012 9:46:43 PM
Copper	ND	0.0060		mg/L	1	9/12/2012 9:46:43 PM
Iron	ND	0.020		mg/L	1	9/12/2012 9:46:43 PM
Lead	ND	0.0050		mg/L	1	9/12/2012 9:46:43 PM
Magnesium	ND	1.0		mg/L	1	9/12/2012 9:46:43 PM
Manganese	0.0054	0.0020		mg/L	1	9/12/2012 9:46:43 PM
Potassium	1.5	1.0		mg/L	1	9/12/2012 9:46:43 PM
Silver	ND	0.0050		mg/L	1	9/12/2012 9:46:43 PM
Sodium	250	5.0		mg/L	5	9/12/2012 9:50:40 PM
Zinc	0.039	0.010		mg/L	1	9/12/2012 9:46:43 PM
EPA METHOD 200.7: TOTAL METALS						Analyst: JLF
Barium	0.029	0.0020		mg/L	1	9/11/2012 12:17:34 PM
Cadmium	ND	0.0020		mg/L	1	9/11/2012 12:17:34 PM
Chromium	ND	0.0060		mg/L	1	9/11/2012 12:17:34 PM
Copper	0.014	0.0060		mg/L	1	9/11/2012 12:17:34 PM
Iron	0.30	0.020	*	mg/L	1	9/11/2012 12:17:34 PM
Lead	ND	0.0050		mg/L	1	9/11/2012 12:17:34 PM
Manganese	0.026	0.0020		mg/L	1	9/11/2012 12:17:34 PM
Silver	ND	0.0050		mg/L	1	9/11/2012 12:17:34 PM
Zinc	0.012	0.010		mg/L	1	9/11/2012 12:17:34 PM
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Arsenic	ND	0.0010		mg/L	1	9/11/2012 12:48:16 PM

Qualifiers:

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- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
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- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-52

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 12:50:00 PM

Lab ID: 1208B37-006

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA 200.8: DISSOLVED METALS						Analyst: DBD
Selenium	ND	0.0010		mg/L	1	9/11/2012 12:48:16 PM
Uranium	0.0072	0.0010		mg/L	1	9/11/2012 12:48:16 PM
200.8 ICPMS METALS:TOTAL						Analyst: DBD
Arsenic	ND	0.0025		mg/L	2.5	9/6/2012 6:21:16 PM
Selenium	ND	0.0025		mg/L	2.5	9/6/2012 6:21:16 PM
Uranium	0.0076	0.0025		mg/L	2.5	9/13/2012 1:56:26 PM
EPA METHOD 245.1: MERCURY						Analyst: JLF
Mercury	ND	0.00020		mg/L	1	9/12/2012 10:16:10 AM
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Acenaphthene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Acenaphthylene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Aniline	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Anthracene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Azobenzene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Benz(a)anthracene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Benzo(a)pyrene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Benzo(b)fluoranthene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Benzo(g,h,i)perylene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Benzo(k)fluoranthene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Benzoic acid	ND	20		µg/L	1	8/31/2012 3:04:08 PM
Benzyl alcohol	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Bis(2-chloroethoxy)methane	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Bis(2-chloroethyl)ether	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Bis(2-chloroisopropyl)ether	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Bis(2-ethylhexyl)phthalate	ND	10		µg/L	1	8/31/2012 3:04:08 PM
4-Bromophenyl phenyl ether	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Butyl benzyl phthalate	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Carbazole	ND	10		µg/L	1	8/31/2012 3:04:08 PM
4-Chloro-3-methylphenol	ND	10		µg/L	1	8/31/2012 3:04:08 PM
4-Chloroaniline	ND	10		µg/L	1	8/31/2012 3:04:08 PM
2-Chloronaphthalene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
2-Chlorophenol	ND	10		µg/L	1	8/31/2012 3:04:08 PM
4-Chlorophenyl phenyl ether	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Chrysene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Di-n-butyl phthalate	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Di-n-octyl phthalate	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Dibenz(a,h)anthracene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Dibenzofuran	ND	10		µg/L	1	8/31/2012 3:04:08 PM
1,2-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
1,3-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 3:04:08 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

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- R RPD outside accepted recovery limits
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-52

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 12:50:00 PM

Lab ID: 1208B37-006

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
1,4-Dichlorobenzene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
3,3'-Dichlorobenzidine	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Diethyl phthalate	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Dimethyl phthalate	ND	10		µg/L	1	8/31/2012 3:04:08 PM
2,4-Dichlorophenol	ND	20		µg/L	1	8/31/2012 3:04:08 PM
2,4-Dimethylphenol	ND	10		µg/L	1	8/31/2012 3:04:08 PM
4,6-Dinitro-2-methylphenol	ND	20		µg/L	1	8/31/2012 3:04:08 PM
2,4-Dinitrophenol	ND	20		µg/L	1	8/31/2012 3:04:08 PM
2,4-Dinitrotoluene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
2,6-Dinitrotoluene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Fluoranthene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Fluorene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Hexachlorobenzene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Hexachlorobutadiene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Hexachlorocyclopentadiene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Hexachloroethane	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Indeno(1,2,3-cd)pyrene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Isophorone	ND	10		µg/L	1	8/31/2012 3:04:08 PM
1-Methylnaphthalene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
2-Methylnaphthalene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
2-Methylphenol	ND	10		µg/L	1	8/31/2012 3:04:08 PM
3+4-Methylphenol	ND	10		µg/L	1	8/31/2012 3:04:08 PM
N-Nitrosodi-n-propylamine	ND	10		µg/L	1	8/31/2012 3:04:08 PM
N-Nitrosodimethylamine	ND	10		µg/L	1	8/31/2012 3:04:08 PM
N-Nitrosodiphenylamine	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Naphthalene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
2-Nitroaniline	ND	10		µg/L	1	8/31/2012 3:04:08 PM
3-Nitroaniline	ND	10		µg/L	1	8/31/2012 3:04:08 PM
4-Nitroaniline	ND	20		µg/L	1	8/31/2012 3:04:08 PM
Nitrobenzene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
2-Nitrophenol	ND	10		µg/L	1	8/31/2012 3:04:08 PM
4-Nitrophenol	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Pentachlorophenol	ND	20		µg/L	1	8/31/2012 3:04:08 PM
Phenanthrene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Phenol	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Pyrene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Pyridine	ND	10		µg/L	1	8/31/2012 3:04:08 PM
1,2,4-Trichlorobenzene	ND	10		µg/L	1	8/31/2012 3:04:08 PM
2,4,5-Trichlorophenol	ND	10		µg/L	1	8/31/2012 3:04:08 PM
2,4,6-Trichlorophenol	ND	10		µg/L	1	8/31/2012 3:04:08 PM
Surr: 2,4,6-Tribromophenol	91.7	44.2-126		%REC	1	8/31/2012 3:04:08 PM
Surr: 2-Fluorobiphenyl	78.1	37-114		%REC	1	8/31/2012 3:04:08 PM

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Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-52

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 12:50:00 PM

Lab ID: 1208B37-006

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES						Analyst: JDC
Surr: 2-Fluorophenol	53.8	23.4-98		%REC	1	8/31/2012 3:04:08 PM
Surr: 4-Terphenyl-d14	78.0	41.3-116		%REC	1	8/31/2012 3:04:08 PM
Surr: Nitrobenzene-d5	80.1	39.5-118		%REC	1	8/31/2012 3:04:08 PM
Surr: Phenol-d5	43.2	20.9-95.9		%REC	1	8/31/2012 3:04:08 PM
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Toluene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Ethylbenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Naphthalene	ND	2.0		µg/L	1	9/1/2012 1:06:47 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 1:06:47 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 1:06:47 AM
Acetone	ND	10		µg/L	1	9/1/2012 1:06:47 AM
Bromobenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Bromoform	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Bromomethane	ND	3.0		µg/L	1	9/1/2012 1:06:47 AM
2-Butanone	ND	10		µg/L	1	9/1/2012 1:06:47 AM
Carbon disulfide	ND	10		µg/L	1	9/1/2012 1:06:47 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Chlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Chloroethane	ND	2.0		µg/L	1	9/1/2012 1:06:47 AM
Chloroform	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Chloromethane	ND	3.0		µg/L	1	9/1/2012 1:06:47 AM
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2012 1:06:47 AM
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Dibromomethane	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: OW-52

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/23/2012 12:50:00 PM

Lab ID: 1208B37-006

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2012 1:06:47 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
2-Hexanone	ND	10		µg/L	1	9/1/2012 1:06:47 AM
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2012 1:06:47 AM
Methylene Chloride	ND	3.0		µg/L	1	9/1/2012 1:06:47 AM
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2012 1:06:47 AM
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Styrene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2012 1:06:47 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2012 1:06:47 AM
Vinyl chloride	ND	1.0		µg/L	1	9/1/2012 1:06:47 AM
Xylenes, Total	ND	1.5		µg/L	1	9/1/2012 1:06:47 AM
Surr: 1,2-Dichloroethane-d4	81.6	70-130		%REC	1	9/1/2012 1:06:47 AM
Surr: 4-Bromofluorobenzene	85.6	70-130		%REC	1	9/1/2012 1:06:47 AM
Surr: Dibromofluoromethane	86.4	70-130		%REC	1	9/1/2012 1:06:47 AM
Surr: Toluene-d8	79.9	70-130		%REC	1	9/1/2012 1:06:47 AM
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: IDC
Conductivity	1000	0.010		µmhos/cm	1	8/28/2012 1:35:29 PM
SM4500-H+B: PH						Analyst: IDC
pH	8.33	1.68	H	pH units	1	8/28/2012 1:35:29 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 11:30:00 AM

Lab ID: 1208B37-007

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Toluene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Ethylbenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Naphthalene	ND	2.0		µg/L	1	9/1/2012 1:34:21 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 1:34:21 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 1:34:21 AM
Acetone	ND	10		µg/L	1	9/1/2012 1:34:21 AM
Bromobenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Bromoform	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Bromomethane	ND	3.0		µg/L	1	9/1/2012 1:34:21 AM
2-Butanone	ND	10		µg/L	1	9/1/2012 1:34:21 AM
Carbon disulfide	ND	10		µg/L	1	9/1/2012 1:34:21 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Chlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Chloroethane	ND	2.0		µg/L	1	9/1/2012 1:34:21 AM
Chloroform	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Chloromethane	ND	3.0		µg/L	1	9/1/2012 1:34:21 AM
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2012 1:34:21 AM
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Dibromomethane	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2012 1:34:21 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
2-Hexanone	ND	10		µg/L	1	9/1/2012 1:34:21 AM

Qualifiers: * Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2
RL Reporting Detection Limit

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Field Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date: 8/24/2012 11:30:00 AM

Lab ID: 1208B37-007

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2012 1:34:21 AM
Methylene Chloride	ND	3.0		µg/L	1	9/1/2012 1:34:21 AM
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2012 1:34:21 AM
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Styrene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2012 1:34:21 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2012 1:34:21 AM
Vinyl chloride	ND	1.0		µg/L	1	9/1/2012 1:34:21 AM
Xylenes, Total	ND	1.5		µg/L	1	9/1/2012 1:34:21 AM
Surr: 1,2-Dichloroethane-d4	81.6	70-130		%REC	1	9/1/2012 1:34:21 AM
Surr: 4-Bromofluorobenzene	82.8	70-130		%REC	1	9/1/2012 1:34:21 AM
Surr: Dibromofluoromethane	84.4	70-130		%REC	1	9/1/2012 1:34:21 AM
Surr: Toluene-d8	81.9	70-130		%REC	1	9/1/2012 1:34:21 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date:

Lab ID: 1208B37-008

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Benzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Toluene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Ethylbenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Naphthalene	ND	2.0		µg/L	1	9/1/2012 2:01:54 AM
1-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 2:01:54 AM
2-Methylnaphthalene	ND	4.0		µg/L	1	9/1/2012 2:01:54 AM
Acetone	ND	10		µg/L	1	9/1/2012 2:01:54 AM
Bromobenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Bromodichloromethane	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Bromoform	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Bromomethane	ND	3.0		µg/L	1	9/1/2012 2:01:54 AM
2-Butanone	ND	10		µg/L	1	9/1/2012 2:01:54 AM
Carbon disulfide	ND	10		µg/L	1	9/1/2012 2:01:54 AM
Carbon Tetrachloride	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Chlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Chloroethane	ND	2.0		µg/L	1	9/1/2012 2:01:54 AM
Chloroform	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Chloromethane	ND	3.0		µg/L	1	9/1/2012 2:01:54 AM
2-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
4-Chlorotoluene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
cis-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/1/2012 2:01:54 AM
Dibromochloromethane	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Dibromomethane	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,2-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
2,2-Dichloropropane	ND	2.0		µg/L	1	9/1/2012 2:01:54 AM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
2-Hexanone	ND	10		µg/L	1	9/1/2012 2:01:54 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1208B37

Date Reported: 10/1/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: Trip Blank

Project: 3rd QTR 2012 Groundwater Sampling

Collection Date:

Lab ID: 1208B37-008

Matrix: AQUEOUS

Received Date: 8/24/2012 3:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: RAA
Isopropylbenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/1/2012 2:01:54 AM
Methylene Chloride	ND	3.0		µg/L	1	9/1/2012 2:01:54 AM
n-Butylbenzene	ND	3.0		µg/L	1	9/1/2012 2:01:54 AM
n-Propylbenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
sec-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Styrene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
tert-Butylbenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	9/1/2012 2:01:54 AM
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
trans-1,2-DCE	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Trichloroethene (TCE)	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
1,2,3-Trichloropropane	ND	2.0		µg/L	1	9/1/2012 2:01:54 AM
Vinyl chloride	ND	1.0		µg/L	1	9/1/2012 2:01:54 AM
Xylenes, Total	ND	1.5		µg/L	1	9/1/2012 2:01:54 AM
Surr: 1,2-Dichloroethane-d4	83.9	70-130		%REC	1	9/1/2012 2:01:54 AM
Surr: 4-Bromofluorobenzene	85.4	70-130		%REC	1	9/1/2012 2:01:54 AM
Surr: Dibromofluoromethane	85.0	70-130		%REC	1	9/1/2012 2:01:54 AM
Surr: Toluene-d8	83.6	70-130		%REC	1	9/1/2012 2:01:54 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3584		SampType:	MBLK		TestCode:	EPA Method 200.7: Metals				
Client ID:	PBW		Batch ID:	3584		RunNo:	5311				
Prep Date:	9/4/2012		Analysis Date:	9/5/2012		SeqNo:	151260		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								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID	LCS-3584			SampType:	LCS			TestCode:	EPA Method 200.7: Metals		
Client ID:	LCSW			Batch ID:	3584			RunNo:	5311		
Prep Date:	9/4/2012			Analysis Date:	9/5/2012			SeqNo:	151261		
								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	0.52	0.0020	0.5000	0	103	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Lead	0.50	0.0050	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B37
01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID MB	SampType: MBLK	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: PBW	Batch ID: R5457	RunNo: 5457								
Prep Date:	Analysis Date: 9/12/2012	SeqNo: 155926 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								
Lead	ND	0.0050								
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: R5457	RunNo: 5457								
Prep Date:	Analysis Date: 9/12/2012	SeqNo: 155927 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	0.51	0.0020	0.5000	0	101	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Copper	0.51	0.0060	0.5000	0	103	85	115			
Iron	0.50	0.020	0.5000	0.002590	99.7	85	115			
Lead	0.50	0.0050	0.5000	0	100	85	115			
Magnesium	53	1.0	50.00	0	106	85	115			
Manganese	0.50	0.0020	0.5000	0	101	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	102	85	115			
Sodium	52	1.0	50.00	0	105	85	115			
Zinc	0.49	0.010	0.5000	0	99.0	85	115			

Sample ID 1208996-003DMS	SampType: MS	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: BatchQC	Batch ID: R5457	RunNo: 5457								
Prep Date:	Analysis Date: 9/12/2012	SeqNo: 156329 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.65	0.0020	0.5000	0.1271	105	70	130			
Cadmium	0.53	0.0020	0.5000	0	105	70	130			
Chromium	0.52	0.0060	0.5000	0.001070	103	70	130			
Copper	0.56	0.0060	0.5000	0	112	70	130			

Notes:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156329	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.56	0.020	0.5000	0.04012	104	70	130			
Lead	0.51	0.0050	0.5000	0	102	70	130			
Magnesium	69	1.0	50.00	13.55	112	70	130			
Manganese	0.53	0.0020	0.5000	0.0006300	106	70	130			
Potassium	56	1.0	50.00	2.284	108	70	130			
Silver	0.10	0.0050	0.1000	0	103	70	130			
Sodium	83	1.0	50.00	27.29	111	70	130			
Zinc	0.52	0.010	0.5000	0.01358	101	70	130			

Sample ID	1208996-003DMSD		SampType: MSD		TestCode: EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC		Batch ID: R5457		RunNo: 5457					
Prep Date:			Analysis Date: 9/12/2012		SeqNo: 156330		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.63	0.0020	0.5000	0.1271	101	70	130	3.05	20	
Cadmium	0.51	0.0020	0.5000	0	102	70	130	2.73	20	
Chromium	0.50	0.0060	0.5000	0.001070	99.7	70	130	3.48	20	
Copper	0.55	0.0060	0.5000	0	110	70	130	1.68	20	
Iron	0.56	0.020	0.5000	0.04012	103	70	130	0.424	20	
Lead	0.50	0.0050	0.5000	0	99.2	70	130	2.65	20	
Magnesium	68	1.0	50.00	13.55	109	70	130	1.63	20	
Manganese	0.52	0.0020	0.5000	0.0006300	103	70	130	2.93	20	
Potassium	55	1.0	50.00	2.284	106	70	130	1.53	20	
Silver	0.099	0.0050	0.1000	0	99.4	70	130	3.30	20	
Sodium	82	1.0	50.00	27.29	109	70	130	0.982	20	
Zinc	0.50	0.010	0.5000	0.01358	96.5	70	130	4.24	20	

Sample ID	1208996-003DMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156332	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	370	5.0	250.0	66.77	122	70	130			

Sample ID	1208996-003DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156333	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	330	5.0	250.0	66.77	106	70	130	11.7	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

OC SUMMARY REPORT

WO#: 1208B37

all Environmental Analysis Laboratory, Inc.

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156417	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								
Lead	ND	0.0050								
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:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156418	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.49	0.0020	0.5000	0.001060	97.0	85	115			
Cadmium	0.48	0.0020	0.5000	0	96.3	85	115			
Calcium	50	1.0	50.00	0	100	85	115			
Chromium	0.48	0.0060	0.5000	0	95.5	85	115			
Copper	0.52	0.0060	0.5000	0	104	85	115			
Iron	0.50	0.020	0.5000	0.003080	99.0	85	115			
Lead	0.47	0.0050	0.5000	0	94.1	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.49	0.0020	0.5000	0	98.8	85	115			
Potassium	49	1.0	50.00	0	98.4	85	115			
Silver	0.10	0.0050	0.1000	0.001260	98.6	85	115			
Sodium	51	1.0	50.00	0	103	85	115			
Zinc	0.46	0.010	0.5000	0	92.6	85	115			

Sample ID	1208A83-002AMS	SampType:	MS	TestCode:	EPA Method 200.7: Dissolved Metals					
Client ID:	BatchQC	Batch ID:	R5457	RunNo:	5457					
Prep Date:		Analysis Date:	9/12/2012	SeqNo:	156420	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.46	0.0020	0.5000	0.007580	89.5	70	130			
Cadmium	0.46	0.0020	0.5000	0.001310	92.5	70	130			
Chromium	0.44	0.0060	0.5000	0	88.1	70	130			
Copper	0.55	0.0060	0.5000	0.04934	99.8	70	130			

ifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208A83-002AMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156420		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.47	0.020	0.5000	0.003920	92.6	70	130			
Magnesium	78	1.0	50.00	28.77	99.1	70	130			
Potassium	50	1.0	50.00	1.179	97.1	70	130			
Silver	0.093	0.0050	0.1000	0	93.0	70	130			
Sodium	60	1.0	50.00	9.466	102	70	130			
Zinc	0.90	0.010	0.5000	0.5237	75.6	70	130			

Sample ID	1208A83-002AMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156421		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.45	0.0020	0.5000	0.007580	88.6	70	130	0.945	20	
Cadmium	0.46	0.0020	0.5000	0.001310	91.1	70	130	1.54	20	
Chromium	0.43	0.0060	0.5000	0	86.4	70	130	1.96	20	
Copper	0.55	0.0060	0.5000	0.04934	99.3	70	130	0.477	20	
Iron	0.46	0.020	0.5000	0.003920	91.1	70	130	1.62	20	
Magnesium	78	1.0	50.00	28.77	98.2	70	130	0.598	20	
Potassium	49	1.0	50.00	1.179	96.4	70	130	0.773	20	
Silver	0.093	0.0050	0.1000	0	93.1	70	130	0.150	20	
Sodium	60	1.0	50.00	9.466	101	70	130	0.803	20	
Zinc	0.89	0.010	0.5000	0.5237	72.8	70	130	1.59	20	

Sample ID	1208A83-002AMS		SampType:	MS		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156423		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130			
Manganese	4.3	0.010	2.500	1.779	99.4	70	130			

Sample ID	1208A83-002AMSD		SampType:	MSD		TestCode:	EPA Method 200.7: Dissolved Metals			
Client ID:	BatchQC		Batch ID:	R5457		RunNo:	5457			
Prep Date:			Analysis Date:	9/12/2012		SeqNo:	156424		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	97.93	101	70	130	0.395	20	
Manganese	4.3	0.010	2.500	1.779	102	70	130	1.46	20	

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3584	SampType:	MBLK	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	PBW	Batch ID:	3584	RunNo:	5311					
Prep Date:	9/4/2012	Analysis Date:	9/5/2012	SeqNo:	151199	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								
Lead	ND	0.0050								
Manganese	ND	0.0020								
Zinc	ND	0.010								

Sample ID	LCS-3584	SampType:	LCS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	LCSW	Batch ID:	3584	RunNo:	5311					
Prep Date:	9/4/2012	Analysis Date:	9/5/2012	SeqNo:	151200	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	0.52	0.0020	0.5000	0	103	85	115			
Chromium	0.50	0.0060	0.5000	0	99.2	85	115			
Copper	0.51	0.0060	0.5000	0	102	85	115			
Iron	0.50	0.020	0.5000	0	100	85	115			
Lead	0.50	0.0050	0.5000	0	100	85	115			
Manganese	0.49	0.0020	0.5000	0	98.2	85	115			
Zinc	0.50	0.010	0.5000	0	100	85	115			

Sample ID	MB-3584	SampType:	MBLK	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	PBW	Batch ID:	3584	RunNo:	5435					
Prep Date:	9/4/2012	Analysis Date:	9/11/2012	SeqNo:	155086	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	ND	0.0050								

Sample ID	LCS-3584	SampType:	LCS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	LCSW	Batch ID:	3584	RunNo:	5435					
Prep Date:	9/4/2012	Analysis Date:	9/11/2012	SeqNo:	155087	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.096	0.0050	0.1000	0	96.4	85	115			

Sample ID	1208B37-002DMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	OW-14	Batch ID:	3584	RunNo:	5435					
Prep Date:	9/4/2012	Analysis Date:	9/11/2012	SeqNo:	155140	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

ifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B37-002DMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	OW-14	Batch ID:	3584	RunNo:	5435					
Prep Date:	9/4/2012	Analysis Date:	9/11/2012	SeqNo:	155140	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.50	0.0020	0.5000	0	100	70	130			
Chromium	0.47	0.0060	0.5000	0	93.5	70	130			
Copper	0.56	0.0060	0.5000	0	111	70	130			
Lead	0.48	0.0050	0.5000	0.003250	94.7	70	130			
Silver	0.024	0.0050	0.1000	0	24.1	70	130			S
Zinc	0.46	0.010	0.5000	0.001840	91.9	70	130			

Sample ID	1208B37-002DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	OW-14	Batch ID:	3584	RunNo:	5435					
Prep Date:	9/4/2012	Analysis Date:	9/11/2012	SeqNo:	155141	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	99.1	70	130	1.07	20	
Chromium	0.46	0.0060	0.5000	0	92.4	70	130	1.20	20	
Copper	0.56	0.0060	0.5000	0	111	70	130	0.121	20	
Lead	0.48	0.0050	0.5000	0.003250	94.4	70	130	0.332	20	
Silver	0.025	0.0050	0.1000	0	25.1	70	130	3.78	20	S
Zinc	0.45	0.010	0.5000	0.001840	90.3	70	130	1.70	20	

Sample ID	1208B37-002DMS	SampType:	MS	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	OW-14	Batch ID:	3584	RunNo:	5435					
Prep Date:	9/4/2012	Analysis Date:	9/11/2012	SeqNo:	155164	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	1.6	0.010	0.5000	1.180	87.6	70	130			

Sample ID	1208B37-002DMSD	SampType:	MSD	TestCode:	EPA Method 200.7: Total Metals					
Client ID:	OW-14	Batch ID:	3584	RunNo:	5435					
Prep Date:	9/4/2012	Analysis Date:	9/11/2012	SeqNo:	155165	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	1.6	0.010	0.5000	1.180	87.1	70	130	0.155	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B37
01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Metals					
Client ID:	LCSW		Batch ID: R5425		RunNo: 5425					
Prep Date:			Analysis Date: 9/11/2012		SeqNo: 154891		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	102	85	115			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Metals					
Client ID:	PBW	Batch ID:	R5425	RunNo:	5425					
Prep Date:		Analysis Date:	9/11/2012	SeqNo:	154893	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	1208932-004AMS		SampType:	MS		TestCode:	EPA 200.8: Metals				
Client ID:	BatchQC		Batch ID:	R5425		RunNo:	5425				
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155236		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.030	0.0010	0.02500	0.005874	96.1	70	130				
Selenium	0.026	0.0010	0.02500	0.002644	93.5	70	130				

Sample ID	1208C61-004AMS			SampType:	MS		TestCode:	EPA 200.8: Metals			
Client ID:	BatchQC			Batch ID:	R5425		RunNo:	5425			
Prep Date:				Analysis Date:	9/11/2012		SeqNo:	155243		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.026	0.0010	0.02500	0.001791	98.5	70	130				
Selenium	0.027	0.0010	0.02500	0.002323	100	70	130				

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Metals					
Client ID:	LCSW		Batch ID: R5425		RunNo: 5425					
Prep Date:			Analysis Date: 9/11/2012		SeqNo: 155260		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.5	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	100	85	115			

Flags:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK		TestCode:	EPA 200.8: Metals					
Client ID:	PBW	Batch ID:	R5425		RunNo:	5425					
Prep Date:		Analysis Date:	9/11/2012		SeqNo:	155261	Units:	mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	0.0010								
Selenium		ND	0.0010								
Uranium		ND	0.0010								

Sample ID	MB-3584	SampType:	MBLK		TestCode:	EPA 200.8: Metals					
Client ID:	PBW	Batch ID:	3584		RunNo:	5508					
Prep Date:	9/4/2012	Analysis Date:	9/13/2012		SeqNo:	157391	Units:	mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		ND	0.0025								

Sample ID	MB-3888	SampType:	MBLK	TestCode:	EPA 200.8: Metals						
Client ID:	PBW	Batch ID:	3888	RunNo:	5786						
Prep Date:	9/24/2012	Analysis Date:	9/26/2012	SeqNo:	166267	Units:	mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Selenium	ND	0.0025									

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

OC SUMMARY REPORT

Small Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	LCS		SampType: LCS		TestCode: EPA 200.8: Dissolved Metals					
Client ID:	LCSW		Batch ID: R5425		RunNo: 5425					
Prep Date:			Analysis Date: 9/11/2012		SeqNo: 154883		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.5	85	115			
Selenium	0.025	0.0010	0.02500	0	101	85	115			
Uranium	0.025	0.0010	0.02500	0	102	85	115			

Sample ID	MB	SampType:	MBLK	TestCode:	EPA 200.8: Dissolved Metals					
Client ID:	PBW	Batch ID:	R5425	RunNo:	5425					
Prep Date:		Analysis Date:	9/11/2012	SeqNo:	154885	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Selenium	ND	0.0010								
Uranium	ND	0.0010								

Sample ID	1208C13-004AMS		SampType:	MS		TestCode:	EPA 200.8: Dissolved Metals				
Client ID:	BatchQC		Batch ID:	R5425		RunNo:	5425				
Prep Date:			Analysis Date:	9/11/2012		SeqNo:	155231		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Arsenic	0.026	0.0010	0.02500	0.0002387	103	70	130				
Selenium	0.026	0.0010	0.02500	0.0004619	104	70	130				

Notes:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3584	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3584	RunNo:	5392					
Prep Date:	9/4/2012	Analysis Date:	9/6/2012	SeqNo:	153679	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0025								
Selenium	ND	0.0025								

Sample ID	MB-3584	SampType:	MBLK		TestCode:	200.8 ICPMS Metals:Total				
Client ID:	PBW	Batch ID:	3584		RunNo:	5508				
Prep Date:	9/4/2012	Analysis Date:	9/13/2012		SeqNo:	157424	Units:	mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.0025								

Sample ID	MB-3888	SampType:	MBLK	TestCode:	200.8 ICPMS Metals:Total					
Client ID:	PBW	Batch ID:	3888	RunNo:	5786					
Prep Date:	9/24/2012	Analysis Date:	9/26/2012	SeqNo:	166261	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	0.0025								

Qualifiers:

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ND Not Detected at the Reporting Limit
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QC SUMMARY REPORT

WO#: 1208B37

all Environmental Analysis Laboratory, Inc.

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3705	SampType:	MBLK	TestCode:	EPA Method 245.1: Mercury					
Client ID:	PBW	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156146	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID	LCS-3705	SampType:	LCS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	LCSW	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156147	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	99.9	80	120			

Sample ID	1208A83-001BMS	SampType:	MS	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156149	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	98.2	75	125			

Sample ID	1208A83-001BMSD	SampType:	MSD	TestCode:	EPA Method 245.1: Mercury					
Client ID:	BatchQC	Batch ID:	3705	RunNo:	5464					
Prep Date:	9/11/2012	Analysis Date:	9/12/2012	SeqNo:	156150	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	97.7	75	125	0.517	20	

Notes:

- | | | |
|--|----|--|
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| Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| Analyte detected below quantitation limits | ND | Not Detected at the Reporting Limit |
| Sample pH greater than 2 | R | RPD outside accepted recovery limits |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType: MBLK			TestCode: EPA Method 300.0: Anions						
Client ID:	PBW	Batch ID: R5147			RunNo: 5147						
Prep Date:		Analysis Date: 8/27/2012			SeqNo: 146216		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:	R5147	RunNo:	5147					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146217	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	93.9	90	110			
Chloride	4.6	0.50	5.000	0	91.9	90	110			
Bromide	2.4	0.10	2.500	0	94.6	90	110			
Phosphorus, Orthophosphate (As P	4.9	0.50	5.000	0	98.8	90	110			
Sulfate	9.5	0.50	10.00	0	94.7	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.2	90	110			

Sample ID	1208B32-001CMS			SampType:	MS		TestCode:	EPA Method 300.0: Anions		
Client ID:	BatchQC		Batch ID:	R5147		RunNo:	5147			
Prep Date:			Analysis Date:	8/27/2012		SeqNo:	146223		Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.65	0.10	0.5000	0.2431	81.8	76.6	110			
Bromide	2.6	0.10	2.500	0.2557	92.0	83.3	107			

Fluoride	0.65	0.10	0.5000	0.2431	81.8	76.6	110			
Bromide	2.6	0.10	2.500	0.2557	92.0	83.3	107			

Sample ID	1208B32-001CMSD			SampType:	MSD		TestCode:	EPA Method 300.0: Anions			
Client ID:	BatchQC		Batch ID:	R5147		RunNo:	5147				
Prep Date:			Analysis Date:	8/27/2012		SeqNo:	146224		Units:	mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Fluoride	0.66	0.10	0.5000	0.2431	83.3	76.6	110	1.12	20	
Bromide	2.6	0.10	2.500	0.2557	91.9	83.3	107	0.110	20	

Sample ID	1208B37-001BMS			SampType:	MS			TestCode:	EPA Method 300.0: Anions			
Client ID:	OW-13			Batch ID:	R5147			RunNo:	5147			
Prep Date:				Analysis Date:	8/27/2012			SeqNo:	146231		Units:	mg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		

Fluoride	0.66	0.10	0.5000	0.2474	83.2	76.6	110			
Bromide	2.6	0.10	2.500	0.3524	91.2	83.3	107			

Qualifiers:

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

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B37
01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208B37-001BMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	OW-13	Batch ID:	R5147	RunNo:	5147					
Prep Date:		Analysis Date:	8/27/2012	SeqNo:	146232	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.67	0.10	0.5000	0.2474	85.0	76.6	110	1.35	20	
Bromide	2.7	0.10	2.500	0.3524	92.0	83.3	107	0.827	20	

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5147	RunNo:	5147					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146268	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID	LCS	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSW	Batch ID:	R5147	RunNo:	5147					
p Date:		Analysis Date:	8/28/2012	SeqNo:	146269	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	94.3	90	110			
Bromide	2.4	0.10	2.500	0	96.0	90	110			
Phosphorus, Orthophosphate (As P	5.0	0.50	5.000	0	100	90	110			
Sulfate	9.6	0.50	10.00	0	95.7	90	110			
Nitrate+Nitrite as N	3.4	0.20	3.500	0	98.2	90	110			

Sample ID	1208B33-006CMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5147	RunNo:	5147					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146277	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.10	0.5000	1.140	79.8	76.6	110			
Bromide	2.4	0.10	2.500	0.1141	90.6	83.3	107			

Sample ID	1208B33-006CMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5147	RunNo:	5147					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146278	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.6	0.10	0.5000	1.140	83.5	76.6	110	1.20	20	
Bromide	2.4	0.10	2.500	0.1141	92.8	83.3	107	2.23	20	

fiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBW	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151555	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:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151556	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	96.7	90	110			

Sample ID	1209077-005AMS	SampType:	MS	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151574	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	0.50	5.000	9.031	108	87.8	111			

Sample ID	1209077-005AMSD	SampType:	MSD	TestCode:	EPA Method 300.0: Anions					
Client ID:	BatchQC	Batch ID:	R5323	RunNo:	5323					
Prep Date:		Analysis Date:	9/5/2012	SeqNo:	151575	Units:	mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	0.50	5.000	9.031	107	87.8	111	0.305	20	

Qualifiers:

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ND Not Detected at the Reporting Limit
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QC SUMMARY REPORT

WO#: 1208B37

all Environmental Analysis Laboratory, Inc.

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	MB-3489		SampType:	MBLK		TestCode:	EPA Method 8015B: Diesel Range				
Client ID:	PBW		Batch ID:	3489		RunNo:	5106				
Prep Date:	8/27/2012		Analysis Date:	8/27/2012		SeqNo:	145462		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	1.0									
Motor Oil Range Organics (MRO)	ND	5.0									
Surr: DNOP	1.2		1.000		118	79.5	166				

Sample ID	LCS-3489		SampType:	LCS		TestCode:	EPA Method 8015B: Diesel Range				
Client ID:	LCSW		Batch ID:	3489		RunNo:	5106				
Prep Date:	8/27/2012		Analysis Date:	8/27/2012		SeqNo:	145463		Units: mg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	4.0	1.0	5.000	0	80.2	74	157				
Surr: DNOP	0.51		0.5000		101	79.5	166				

Sample ID	LCSD-3489		SampType:	LCSD		TestCode:	EPA Method 8015B: Diesel Range				
Client ID:	LCSS02		Batch ID:	3489		RunNo:	5106				
Prep Date:	8/27/2012		Analysis Date:	8/27/2012		SeqNo:	145464		Units: mg/L		
lyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	4.2	1.0	5.000	0	84.5	74	157	5.19	23		
Surr: DNOP	0.52		0.5000		104	79.5	166	0	0		

ifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: 5ML RB	SampType: MBLK	TestCode: EPA Method 8015B: Gasoline Range								
Client ID: PBW	Batch ID: R5174	RunNo: 5174								
Prep Date:	Analysis Date: 8/29/2012	SeqNo: 147866	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	19		20.00		96.1	69.8	119			

Sample ID: 2.5UG GRO LCS	SampType: LCS	TestCode: EPA Method 8015B: Gasoline Range								
Client ID: LCSW	Batch ID: R5174	RunNo: 5174								
Prep Date:	Analysis Date: 8/29/2012	SeqNo: 147868	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.41	0.050	0.5000	0	82.3	75.9	119			
Surr: BFB	21		20.00		103	69.8	119			

Qualifiers:

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E Value above quantitation range
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P Sample pH greater than 2

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QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ML RB	SampType:	MBLK	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	PBS	Batch ID:	R5174	RunNo:	5174					
Prep Date:		Analysis Date:	8/29/2012	SeqNo:	147892	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		96.7	80	120			

Sample ID	100NG BTEX LCS	SampType:	LCS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID:	R5174	RunNo:	5174					
Prep Date:		Analysis Date:	8/29/2012	SeqNo:	147893	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		102	80	120			

Sample ID	1208C71-001AMS	SampType:	MS	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5174	RunNo:	5174					
Prep Date:		Analysis Date:	8/29/2012	SeqNo:	147898	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.83		0.8248		101	80	120			

Sample ID	1208C71-001AMSD	SampType:	MSD	TestCode:	EPA Method 8021B: Volatiles					
Client ID:	BatchQC	Batch ID:	R5174	RunNo:	5174					
Prep Date:		Analysis Date:	8/29/2012	SeqNo:	147909	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.86		0.8248		104	80	120	0	0	

Notes:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID b3	SampType: MBLK		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150165		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								
Xylenes, Total	ND	2.0								
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.5	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		82.2	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.5	70	130			
Surr: Toluene-d8	7.3		10.00		73.3	70	130			

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260: Volatiles Short List							
Client ID: LCSW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150166		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	19	1.0	20.00	0	96.2	80	120			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.9	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.4	70	130			
Surr: Toluene-d8	8.0		10.00		79.7	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 |
| P Sample pH greater than 2 | R RPD outside accepted recovery limits |

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml-rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R5276		RunNo: 5276						
Prep Date:		Analysis Date: 8/31/2012		SeqNo: 150096		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								
Peromomethane	ND	3.0								
anone	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								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	5ml-rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150096	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.5	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		87.2	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.5	70	130			
Surr: Toluene-d8	8.1		10.00		80.9	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	8/31/2012	SeqNo:	150102	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Benzene	19	1.0	20.00	0	96.0	70	130			
Toluene	20	1.0	20.00	0	98.3	80	120			
Chlorobenzene	19	1.0	20.00	0	95.3	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	92.3	73.7	122			
Trichloroethene (TCE)	18	1.0	20.00	0	92.0	70	130			
Surr: 1,2-Dichloroethane-d4	8.3		10.00		83.3	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		83.2	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150102		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	8.3		10.00		83.1	70	130			
Surr: Toluene-d8	8.6		10.00		86.0	70	130			

Sample ID 1208b33-001a ms	SampType: MS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: BatchQC	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150105		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.2	66.8	128			
Toluene	19	1.0	20.00	0	93.4	70	130			
Chlorobenzene	18	1.0	20.00	0	87.7	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.4	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.8	70	130			
Surr: 1,2-Dichloroethane-d4	8.5		10.00		84.7	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		81.9	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.3	70	130			
Surr: Toluene-d8	8.1		10.00		80.9	70	130			

Sample ID 1208b33-001a msd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES							
Client ID: BatchQC	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150106		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	93.0	66.8	128	3.31	16.7	
Toluene	18	1.0	20.00	0	92.1	70	130	1.37	18.7	
Chlorobenzene	18	1.0	20.00	0	88.2	70	130	0.567	19.5	
1,1-Dichloroethene	18	1.0	20.00	0	88.3	70	130	3.50	16.7	
Trichloroethene (TCE)	16	1.0	20.00	0	80.0	70	130	9.39	17.5	
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	8.4		10.00		83.7	70	130	0	0	
Surr: Dibromofluoromethane	8.2		10.00		82.3	70	130	0	0	
Surr: Toluene-d8	8.4		10.00		83.6	70	130	0	0	

Sample ID b3	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150141		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								

Notes:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: b3	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R5276			RunNo: 5276						
Prep Date:	Analysis Date: 8/31/2012			SeqNo: 150141		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
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								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B37

Ill Environmental Analysis Laboratory, Inc.

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID b3	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150141		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
Bromofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.5	70	130			
Surr: 4-Bromofluorobenzene	8.2		10.00		82.2	70	130			
Surr: Dibromofluoromethane	8.7		10.00		87.5	70	130			
Surr: Toluene-d8	7.3		10.00		73.3	70	130			

Sample ID 100ng lcs2	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 8/31/2012		SeqNo: 150143		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	19	1.0	20.00	0	96.2	80	120			
Chlorobenzene	18	1.0	20.00	0	90.4	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	87.5	73.7	122			
Trichloroethene (TCE)	17	1.0	20.00	0	83.7	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.9	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	7.9		10.00		79.4	70	130			
Surr: Toluene-d8	8.0		10.00		79.7	70	130			

ifiers:

- Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH greater than 2

- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208b42-003a ms		SampType:	MS		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	BatchQC		Batch ID:	R5276		RunNo:	5276				
Prep Date:			Analysis Date:	9/1/2012		SeqNo:	150144		Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	20	1.0	20.00	0	98.1	66.8	128				
Toluene	21	1.0	20.00	0	104	70	130				
Chlorobenzene	20	1.0	20.00	0	102	70	130				
1,1-Dichloroethene	19	1.0	20.00	0	92.5	70	130				
Trichloroethene (TCE)	18	1.0	20.00	0	89.4	70	130				
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.8	70	130				
Surr: 4-Bromofluorobenzene	8.7		10.00		86.7	70	130				
Surr: Dibromofluoromethane	8.6		10.00		85.6	70	130				
Surr: Toluene-d8	8.7		10.00		87.0	70	130				

Sample ID	1208b42-003a msd			SampType:	MSD		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	BatchQC		Batch ID:	R5276		RunNo:	5276				
Prep Date:			Analysis Date:	9/1/2012		SeqNo:	150145		Units:	µg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	19	1.0	20.00	0	92.7	66.8	128	5.60	16.7		
Toluene	19	1.0	20.00	0	93.1	70	130	11.3	18.7		
Chlorobenzene	19	1.0	20.00	0	92.5	70	130	9.49	19.5		
1,1-Dichloroethene	18	1.0	20.00	0	88.4	70	130	4.61	16.7		
Trichloroethene (TCE)	17	1.0	20.00	0	84.3	70	130	5.77	17.5		
Surr: 1,2-Dichloroethane-d4	8.3		10.00		82.8	70	130	0	0		
Surr: 4-Bromofluorobenzene	8.6		10.00		85.7	70	130	0	0		
Surr: Dibromofluoromethane	8.4		10.00		83.9	70	130	0	0		
Surr: Toluene-d8	8.6		10.00		85.5	70	130	0	0		

Sample ID	b7	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID: R5276			RunNo: 5276					
Prep Date:		Analysis Date: 9/1/2012			SeqNo: 150170		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								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1208B37

all Environmental Analysis Laboratory, Inc.

01-Oct-12

Client: Western Refining Southwest, Gallup

Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: b7	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: R5276		RunNo: 5276							
Prep Date:	Analysis Date: 9/1/2012		SeqNo: 150170		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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								
1,1-Dichloroethane	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								

Notes:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID b7	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: R5276	RunNo: 5276								
Prep Date:	Analysis Date: 9/1/2012	SeqNo: 150170			Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	8.4		10.00		83.8	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		86.5	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.7	70	130			
Surr: Toluene-d8	8.2		10.00		82.4	70	130			

Sample ID 100ng lcs3	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: R5276	RunNo: 5276								
Prep Date:	Analysis Date: 9/1/2012	SeqNo: 150173			Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.7	70	130			
Toluene	19	1.0	20.00	0	94.8	80	120			
Chlorobenzene	18	1.0	20.00	0	92.3	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	87.5	73.7	122			
Trichloroethene (TCE)	17	1.0	20.00	0	86.4	70	130			
Surr: 1,2-Dichloroethane-d4	8.2		10.00		82.1	70	130			
Surr: 4-Bromofluorobenzene	8.3		10.00		82.6	70	130			
Surr: Dibromofluoromethane	8.6		10.00		85.7	70	130			
Surr: Toluene-d8	8.2		10.00		81.7	70	130			

Sample ID 1208c45-009a ms	SampType: MS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: BatchQC	Batch ID: R5276	RunNo: 5276								
Prep Date:	Analysis Date: 9/1/2012	SeqNo: 150176			Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.6	66.8	128			
Toluene	19	1.0	20.00	0	95.4	70	130			
Chlorobenzene	18	1.0	20.00	0	89.0	70	130			
1,1-Dichloroethene	18	1.0	20.00	0	91.1	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0.3838	86.1	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 |
| P Sample pH greater than 2 | R RPD outside accepted recovery limits |

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208c45-009a ms	SampType:	MS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5276	RunNo:	5276					
Prep Date:		Analysis Date:	9/1/2012	SeqNo:	150176	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.1		10.00		80.7	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.7	70	130			
Surr: Dibromofluoromethane	8.8		10.00		87.8	70	130			
Surr: Toluene-d8	8.3		10.00		82.6	70	130			

Sample ID	1208c45-009a msd			SampType:	MSD		TestCode:	EPA Method 8260B: VOLATILES			
Client ID:	BatchQC		Batch ID:		R5276		RunNo:	5276			
Prep Date:			Analysis Date:		9/1/2012		SeqNo:	150177		Units:	µg/L
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	18	1.0	20.00	0	90.2	66.8	128	5.78	16.7		
Toluene	19	1.0	20.00	0	93.6	70	130	1.86	18.7		
Chlorobenzene	18	1.0	20.00	0	89.4	70	130	0.446	19.5		
1,1-Dichloroethene	17	1.0	20.00	0	85.0	70	130	6.99	16.7		
Trichloroethene (TCE)	16	1.0	20.00	0.3838	80.3	70	130	6.85	17.5		
Surr: 1,2-Dichloroethane-d4	8.0		10.00		79.9	70	130	0	0		
Surr: 4-Bromofluorobenzene	8.8		10.00		88.2	70	130	0	0		
Surr: Dibromofluoromethane	7.8		10.00		77.5	70	130	0	0		
Surr: Toluene-d8	8.3		10.00		82.9	70	130	0	0		

Sample ID	5ml-rb	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R5302		RunNo:	5302				
Prep Date:		Analysis Date:	9/4/2012		SeqNo:	150947	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		85.8	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		91.7	70	130			
Surr: Dibromofluoromethane	8.9		10.00		89.1	70	130			
Surr: Toluene-d8	8.4		10.00		84.3	70	130			

Sample ID	100ng lcs	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5302	RunNo:	5302					
Prep Date:		Analysis Date:	9/4/2012	SeqNo:	150949	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.8		10.00		87.9	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		88.7	70	130			
Surr: Dibromofluoromethane	8.2		10.00		82.0	70	130			
Surr: Toluene-d8	8.0		10.00		80.5	70	130			

ifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID 1208c67-001a ms		SampType: MS		TestCode: EPA Method 8260B: VOLATILES						
Client ID: BatchQC		Batch ID: R5302		RunNo: 5302						
Prep Date:		Analysis Date: 9/4/2012		SeqNo: 150961		Units: %REC				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	420		500.0		84.0	70	130			
Surr: 4-Bromofluorobenzene	440		500.0		88.6	70	130			
Surr: Dibromofluoromethane	430		500.0		85.4	70	130			
Surr: Toluene-d8	400		500.0		79.9	70	130			

Sample ID	1208c67-001a msd	SampType:	MSD	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	BatchQC	Batch ID:	R5302	RunNo:	5302					
Prep Date:		Analysis Date:	9/4/2012	SeqNo:	150962	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	440		500.0		87.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	420		500.0		83.7	70	130	0	0	
Surr: Dibromofluoromethane	450		500.0		90.1	70	130	0	0	
Surr: Toluene-d8	420		500.0		83.4	70	130	0	0	

Sample ID	b3	SampType:	MBLK		TestCode:	EPA Method 8260B: VOLATILES				
Client ID:	PBW	Batch ID:	R5302		RunNo:	5302				
Prep Date:		Analysis Date:	9/4/2012		SeqNo:	150988	Units:	µg/L		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		85.7	70	130			
Surr: 4-Bromofluorobenzene	8.5		10.00		84.9	70	130			
Surr: Dibromofluoromethane	8.4		10.00		84.5	70	130			
Surr: Toluene-d8	8.1		10.00		81.4	70	130			

Sample ID	100ng lcs2	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R5302	RunNo:	5302					
Prep Date:		Analysis Date:	9/4/2012	SeqNo:	150989	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.7		10.00		86.6	70	130			
Surr: 4-Bromofluorobenzene	8.7		10.00		87.0	70	130			
Surr: Dibromofluoromethane	8.7		10.00		86.8	70	130			
Surr: Toluene-d8	8.1		10.00		80.7	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 |
| P Sample pH greater than 2 | R RPD outside accepted recovery limits |

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B37
01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID: mb-3504	SampType: MBLK		TestCode: EPA Method 8270C: Semivolatiles							
Client ID: PBW	Batch ID: 3504		RunNo: 5185							
Prep Date: 8/28/2012	Analysis Date: 8/29/2012		SeqNo: 147346		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								
mophenyl 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								
2,4-Dinitrotoluene	ND	10								
2,6-Dinitrotoluene	ND	10								

ifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	mb-3504	SampType:	MBLK	TestCode:	EPA Method 8270C: Semivolatiles					
Client ID:	PBW	Batch ID:	3504	RunNo:	5185					
Prep Date:	8/28/2012	Analysis Date:	8/29/2012	SeqNo:	147346	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	ND	10								
Fluorene	ND	10								
Hexachlorobenzene	ND	10								
Hexachlorobutadiene	ND	10								
Hexachlorocyclopentadiene	ND	10								
Hexachloroethane	ND	10								
Indeno(1,2,3-cd)pyrene	ND	10								
Isophorone	ND	10								
1-Methylnaphthalene	ND	10								
2-Methylnaphthalene	ND	10								
2-Methylphenol	ND	10								
3+4-Methylphenol	ND	10								
N-Nitrosodi-n-propylamine	ND	10								
N-Nitrosodimethylamine	ND	10								
N-Nitrosodiphenylamine	ND	10								
Naphthalene	ND	10								
2-Nitroaniline	ND	10								
3-Nitroaniline	ND	10								
4-Nitroaniline	ND	20								
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: 2,4,6-Tribromophenol	180		200.0		88.0	44.2	126			
Surr: 2-Fluorobiphenyl	60		100.0		60.3	37	114			
Surr: 2-Fluorophenol	94		200.0		47.0	23.4	98			
Surr: 4-Terphenyl-d14	72		100.0		72.5	41.3	116			
Surr: Nitrobenzene-d5	59		100.0		58.9	39.5	118			
Surr: Phenol-d5	75		200.0		37.5	20.9	95.9			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	Ics-3504		SampType: LCS		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSW		Batch ID: 3504		RunNo: 5185					
Prep Date:	8/28/2012		Analysis Date: 8/29/2012		SeqNo: 147347		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	76	10	100.0	0	75.7	38.2	99.4			
4-Chloro-3-methylphenol	160	10	200.0	0	80.7	35.5	108			
2-Chlorophenol	160	10	200.0	0	78.0	29.8	106			
1,4-Dichlorobenzene	65	10	100.0	0	65.0	32.6	91.5			
2,4-Dinitrotoluene	92	10	100.0	0	92.2	44.7	112			
N-Nitrosodi-n-propylamine	78	10	100.0	0	78.2	38.5	105			
4-Nitrophenol	120	10	200.0	0	58.1	11.6	73.1			
Pentachlorophenol	180	20	200.0	0	88.2	20.2	93			
Phenol	99	10	200.0	0	49.4	23	66.1			
Pyrene	77	10	100.0	0	77.4	40.1	101			
1,2,4-Trichlorobenzene	71	10	100.0	0	71.2	37.7	99.1			
Surr: 2,4,6-Tribromophenol	210		200.0		105	44.2	126			
Surr: 2-Fluorobiphenyl	76		100.0		75.7	37	114			
Surr: 2-Fluorophenol	110		200.0		54.0	23.4	98			
Surr: 4-Terphenyl-d14	82		100.0		82.5	41.3	116			
Surr: Nitrobenzene-d5	80		100.0		80.2	39.5	118			
Surr: Phenol-d5	96		200.0		48.2	20.9	95.9			

Sample ID	Icsd-3504		SampType: LCSD		TestCode: EPA Method 8270C: Semivolatiles					
Client ID:	LCSS02		Batch ID: 3504		RunNo: 5185					
Prep Date:	8/28/2012		Analysis Date: 8/29/2012		SeqNo: 147348		Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	63	10	100.0	0	62.5	38.2	99.4	19.0	20	
4-Chloro-3-methylphenol	120	10	200.0	0	60.9	35.5	108	27.9	20	R
2-Chlorophenol	120	10	200.0	0	57.9	29.8	106	29.6	20	R
1,4-Dichlorobenzene	44	10	100.0	0	44.0	32.6	91.5	38.6	20	R
2,4-Dinitrotoluene	78	10	100.0	0	78.0	44.7	112	16.6	20	
N-Nitrosodi-n-propylamine	63	10	100.0	0	63.2	38.5	105	21.3	20	R
4-Nitrophenol	94	10	200.0	0	46.9	11.6	73.1	21.3	20	R
Pentachlorophenol	130	20	200.0	0	64.8	20.2	93	30.6	20	R
Phenol	71	10	200.0	0	35.7	23	66.1	32.2	20	R
Pyrene	65	10	100.0	0	65.2	40.1	101	17.0	20	
1,2,4-Trichlorobenzene	56	10	100.0	0	56.0	37.7	99.1	23.8	20	R
Surr: 2,4,6-Tribromophenol	150		200.0		74.9	44.2	126	0	0	
Surr: 2-Fluorobiphenyl	65		100.0		64.7	37	114	0	0	
Surr: 2-Fluorophenol	91		200.0		45.4	23.4	98	0	0	
Surr: 4-Terphenyl-d14	68		100.0		67.8	41.3	116	0	0	
Surr: Nitrobenzene-d5	62		100.0		62.5	39.5	118	0	0	
Surr: Phenol-d5	76		200.0		38.0	20.9	95.9	0	0	

ifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1208B37

01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208b00-001a dup	SampType:	dup	TestCode:	EPA 120.1: Specific Conductance					
Client ID:	BatchQC	Batch ID:	R5163	RunNo:	5163					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146809	Units:	µmhos/cm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	400	0.010						0.0496	20	

Sample ID	1208a37-001d dup	SampType:	dup	TestCode:	EPA 120.1: Specific Conductance					
Client ID:	BatchQC	Batch ID:	R5163	RunNo:	5163					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146822	Units:	µmhos/cm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	400	0.010						0.810	20	

Sample ID	1208a66-001d dup	SampType:	dup	TestCode:	EPA 120.1: Specific Conductance					
Client ID:	BatchQC	Batch ID:	R5163	RunNo:	5163					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146829	Units:	µmhos/cm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	3.6	0.010						35.4	20	R

Qualifiers:

* Value exceeds Maximum Contaminant Level.
E Value above quantitation range
J Analyte detected below quantitation limits
P Sample pH greater than 2

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits

QC SUMMARY REPORT

all Environmental Analysis Laboratory, Inc.

WO#: 1208B37
01-Oct-12

Client: Western Refining Southwest, Gallup
Project: 3rd QTR 2012 Groundwater Sampling

Sample ID	1208b00-001a dup	SampType:	dup	TestCode:	SM4500-H+B: pH					
Client ID:	BatchQC	Batch ID:	R5163	RunNo:	5163					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146864	Units:	pH units			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	9.17	1.68								*H

Sample ID	1208a37-001d dup	SampType:	dup	TestCode:	SM4500-H+B: pH					
Client ID:	BatchQC	Batch ID:	R5163	RunNo:	5163					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146876	Units:	pH units			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.21	1.68								H

Sample ID	1208a66-001d dup	SampType:	dup	TestCode:	SM4500-H+B: pH					
Client ID:	BatchQC	Batch ID:	R5163	RunNo:	5163					
Prep Date:		Analysis Date:	8/28/2012	SeqNo:	146882	Units:	pH units			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	5.64	1.68								H

ifiers:

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

Sample Log-In Check List

Client Name: Western Refining Gallup Work Order Number: 1208B37
Received by/date: CM 08/24/12
Logged By: Anne Thorne 8/24/2012 3:40:00 PM *Anne Thorne*
Completed By: Anne Thorne 8/27/2012 *Anne Thorne*
Reviewed By: *MA* *08/27/12*

Chain of Custody

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

Log In

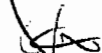
- | | | | | | | |
|--|-----|-------------------------------------|----|-------------------------------------|--------------|--------------------------|
| 4. Coolers are present? (see 19. for cooler specific information) | Yes | ☒ | No | ☐ | NA | ☐ |
| 5. Was an attempt made to cool the samples? | Yes | ☒ | No | ☐ | NA | ☐ |
| 6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C | Yes | ☒ | No | ☐ | NA | ☐ |
| 7. Sample(s) in proper container(s)? | Yes | ☒ | No | ☐ | | |
| 8. Sufficient sample volume for indicated test(s)? | Yes | ☒ | No | ☐ | | |
| 9. Are samples (except VOA and ONG) properly preserved? | Yes | ☒ | No | ☐ | | |
| 10. Was preservative added to bottles? | Yes | ☐ | No | ☒ | NA | ☐ |
| 11. VOA vials have zero headspace? | Yes | ☒ | No | ☐ | No VOA Vials | ☐ |
| 12. Were any sample containers received broken? | Yes | ☐ | No | ☒ | | |
| 13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) | Yes | ☒ | No | ☐ | | |
| 14. Are matrices correctly identified on Chain of Custody? | Yes | ☒ | No | ☐ | | |
| 15. Is it clear what analyses were requested? | Yes | ☒ | No | ☐ | | |
| 16. Were all holding times able to be met?
(If no, notify customer for authorization.) | Yes | ☒ | No | ☐ | | |
- # of preserved bottles checked for pH:

Adjusted pH:

Check:

of preserved bottles checked
for pH: 18
(<2 or >12 unless noted)

Adjusted?

Checked by: 

Special Handling (if applicable)

17. 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: _____

18. Additional remarks:

19. Cooler Information

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

Unalut Custody Record

Client: Western Refining

Mailing Address:

Rt 3 Box 7

Gallup, NM 87301

Phone #: 505-722-3833

email or Fax#: 505-722-0210

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 10

Sample Request ID

Matrix

Date

Container Type and #

Preservative Type

HEAL No.

1208B37

8015B (DRO/GRO)

WQCC Metals (Total and Dissolved)

Analysis Request

Air Bubbles (Y or N)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Remarks:

Received by: *[Signature]* Date: 8/24/12 Time: 1540

Relinquished by: *[Signature]* Date: 8/24/12 Time: 1540

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.