GALLUP

NOV 2010

4th Q 2010

GWM-1
NAPIS
PW-3

ENTERED

## VanHorn, Kristen, NMENV

**From:** Johnson, Cheryl [Cheryl.Johnson@wnr.com]
**Sent:** Monday, November 22, 2010 9:56 AM
**To:** Van Horn, Kristen, NMENV; Chavez, Carl J, EMNRD
**Cc:** Riege, Ed; Larsen, Thurman
**Subject:** 4th Quarter Results GWM-1, NAPIS Wells and re-sample of PW-3.
**Attachments:** 1010251A.PDF; 1011139.pdf; 1011030.pdf

Good morning: Attached are the 4th quarter results of the ground water monitoring wells, and the NAPIS Wells.

PW-3 – Re-sampled for 8270 only due to lab error on extraction time. Results show non-detect for all parameters.

GWM-1 - A slight decrease in benzene, toluene, ethylbenzene and xylenes from last quarter. An increase of MTBE from last quarter of 0.053 mg/L to 0.062 mg/L this quarter.

GWM-2 - Water was detected in this well last quarter. Sampled on 9/16/10 and re-sampled on 10/4/10. BTEX was non-detect in both sampling events. MTBE detected at 0.11 mg/L.
GWM-3 - Water was detected in this well last quarter. Sampled on 9/16/10 and re-sampled on 10/4/10. BTEX was non-detect for both sampling events. MTBE detected at 0.009 mg/L on 9/16/10 and 0.0092 mg/L.

Napis 2 – Benzene 0.015 mg/L a slight decrease from last quarter. MTBE 0.27 mg/L an increase from last quarter of 0.23 mg/L.

KA-3 – Decrease in Benzene 0.23 mg/L, last quarter 0.52 mg/L; Ethylbenzene 0.014 mg/L 4th quarter, 0.031mg/L 3rd quarter; MTBE decrease 0.1 mg/L 4th quarter, 0.11mg/L 3rd quarter.

If you have any questions please call or e-mail me. Thank you, cj.

Cheryl Johnson
Environmental Specialist

Western Refining - Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
505 722 0231 Direct
505 722 0210 Fax
505 722 3833 Main
cheryl.johnson@wnr.com

HALL ENVIRONMENTAL ANALYSIS LABORATORY

# COVER LETTER

Tuesday, November 02, 2010

Cheryl Johnson
Western Refining Southwest, Gallup
Rt. 3 Box 7
Gallup, NM 87301

TEL: (505) 722-0231
FAX (505) 722-0210

RE: GWM 2,3

Order No.: 1010251

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory, Inc. received 2 sample(s) on 10/5/2010 for the analyses presented in the following report.

This report is an addendum to the report dated October 29, 2010. This is an updated report.

No determination of compounds below these (denoted by the ND or < sign) has been made.

Reporting limits are determined by EPA methodology.

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

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *02-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | GWM-2 |
| **Lab Order:** | 1010251 | **Collection Date:** | 10/4/2010 9:20:00 AM |
| **Project:** | GWM 2,3 | **Date Received:** | 10/5/2010 |
| **Lab ID:** | 1010251-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 10/8/2010 10:20:42 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 10/8/2010 10:20:42 PM |
| Surr: DNOP | 123 | 86.9-151 | | %REC | 1 | 10/8/2010 10:20:42 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 0.050 | | mg/L | 1 | 10/14/2010 1:58:34 PM |
| Surr: BFB | 159 | 79.9-117 | S | %REC | 1 | 10/14/2010 1:58:34 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.52 | 0.10 | | mg/L | 1 | 10/7/2010 12:48:17 AM |
| Chloride | 1800 | 100 | | mg/L | 200 | 10/8/2010 1:49:25 AM |
| Bromide | 3.4 | 0.10 | | mg/L | 1 | 10/7/2010 12:48:17 AM |
| Nitrate (As N)+Nitrite (As N) | ND | 4.0 | | mg/L | 20 | 10/8/2010 2:06:50 AM |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | H | mg/L | 1 | 10/7/2010 12:48:17 AM |
| Sulfate | 740 | 10 | | mg/L | 20 | 10/7/2010 1:05:41 AM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **RAGS** |
| Calcium | 420 | 10 | | mg/L | 10 | 10/19/2010 2:09:20 PM |
| Magnesium | 77 | 1.0 | | mg/L | 1 | 10/18/2010 12:16:53 PM |
| Potassium | 3.0 | 1.0 | | mg/L | 1 | 10/18/2010 12:16:53 PM |
| Sodium | 910 | 10 | | mg/L | 10 | 10/19/2010 2:09:20 PM |
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: **MMS** |
| Benzene | ND | 1.0 | | µg/L | 1 | 10/14/2010 11:03:36 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 10/14/2010 11:03:36 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 10/14/2010 11:03:36 PM |
| Methyl tert-butyl ether (MTBE) | 11 | 1.5 | | µg/L | 1 | 10/14/2010 11:03:36 PM |
| Xylenes, Total | ND | 3.0 | | µg/L | 1 | 10/14/2010 11:03:36 PM |
| Surr: 4-Bromofluorobenzene | 88.6 | 60.1-133 | | %REC | 1 | 10/14/2010 11:03:36 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *02-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | GWM-3 |
| **Lab Order:** | 1010251 | **Collection Date:** | 10/4/2010 9:59:00 AM |
| **Project:** | GWM 2,3 | **Date Received:** | 10/5/2010 |
| **Lab ID:** | 1010251-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | 1.3 | 1.0 | | mg/L | 1 | 10/8/2010 10:54:02 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 10/8/2010 10:54:02 PM |
| Surr: DNOP | 135 | 86.9-151 | | %REC | 1 | 10/8/2010 10:54:02 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.12 | 0.050 | | mg/L | 1 | 10/14/2010 2:27:30 PM |
| Surr: BFB | 287 | 79.9-117 | S | %REC | 1 | 10/14/2010 2:27:30 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 5.9 | 2.0 | | mg/L | 20 | 10/7/2010 2:15:21 AM |
| Chloride | 1800 | 100 | | mg/L | 200 | 10/8/2010 2:59:04 AM |
| Bromide | 2.3 | 0.10 | | mg/L | 1 | 10/7/2010 1:57:56 AM |
| Nitrate (As N)+Nitrite (As N) | 61 | 4.0 | | mg/L | 20 | 10/8/2010 2:41:39 AM |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | H | mg/L | 1 | 10/7/2010 1:57:56 AM |
| Sulfate | 1500 | 25 | | mg/L | 50 | 10/8/2010 2:24:15 AM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **SNV** |
| Calcium | 450 | 20 | | mg/L | 20 | 10/21/2010 12:39:56 PM |
| Magnesium | 89 | 1.0 | | mg/L | 1 | 10/21/2010 11:13:21 AM |
| Potassium | 7.6 | 1.0 | | mg/L | 1 | 10/21/2010 11:13:21 AM |
| Sodium | 1300 | 20 | | mg/L | 20 | 10/22/2010 10:12:38 AM |
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: **MMS** |
| Benzene | ND | 1.0 | | µg/L | 1 | 10/15/2010 2:03:12 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 10/15/2010 2:03:12 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 10/15/2010 2:03:12 PM |
| Methyl tert-butyl ether (MTBE) | 9.2 | 1.5 | | µg/L | 1 | 10/15/2010 2:03:12 PM |
| Xylenes, Total | ND | 3.0 | | µg/L | 1 | 10/15/2010 2:03:12 PM |
| Surr: 4-Bromofluorobenzene | 101 | 76.4-106 | | %REC | 1 | 10/15/2010 2:03:12 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** GWM 2,3 **Work Order:** 1010251

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 300.0: Anions** | | | | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R41404** | Analysis Date: | | 10/6/2010 12:02:06 PM | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Bromide | ND | mg/L | 0.10 | | | | | | | | |
| Nitrate (As N)+Nitrite (As N) | ND | mg/L | 0.20 | | | | | | | | |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R41424** | Analysis Date: | | 10/7/2010 3:22:36 PM | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Bromide | ND | mg/L | 0.10 | | | | | | | | |
| Nitrate (As N)+Nitrite (As N) | ND | mg/L | 0.20 | | | | | | | | |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R41404** | Analysis Date: | | 10/6/2010 12:19:31 PM | |
| Fluoride | 0.5245 | mg/L | 0.10 | 0.5 | 0 | 105 | 90 | 110 | | | |
| Chloride | 4.732 | mg/L | 0.50 | 5 | 0 | 94.6 | 90 | 110 | | | |
| Bromide | 2.442 | mg/L | 0.10 | 2.5 | 0.0404 | 96.1 | 90 | 110 | | | |
| Nitrate (As N)+Nitrite (As N) | 3.427 | mg/L | 0.20 | 3.5 | 0 | 97.9 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P) | 4.854 | mg/L | 0.50 | 5 | 0 | 97.1 | 90 | 110 | | | |
| Sulfate | 9.895 | mg/L | 0.50 | 10 | 0 | 98.9 | 90 | 110 | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R41424** | Analysis Date: | | 10/7/2010 3:40:00 PM | |
| Fluoride | 0.5230 | mg/L | 0.10 | 0.5 | 0 | 105 | 90 | 110 | | | |
| Chloride | 4.838 | mg/L | 0.50 | 5 | 0 | 96.8 | 90 | 110 | | | |
| Bromide | 2.492 | mg/L | 0.10 | 2.5 | 0 | 99.7 | 90 | 110 | | | |
| Nitrate (As N)+Nitrite (As N) | 3.498 | mg/L | 0.20 | 3.5 | 0 | 99.9 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P) | 4.912 | mg/L | 0.50 | 5 | 0 | 98.2 | 90 | 110 | | | |
| Sulfate | 10.00 | mg/L | 0.50 | 10 | 0 | 100 | 90 | 110 | | | |
| **Method: EPA Method 8015B: Diesel Range** | | | | | | | | | | | |
| **Sample ID: MB-24038** | | *MBLK* | | | | Batch ID: | **24038** | Analysis Date: | | 10/8/2010 3:34:23 PM | |
| Diesel Range Organics (DRO) | ND | mg/L | 1.0 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | mg/L | 5.0 | | | | | | | | |
| **Sample ID: LCS-24038** | | *LCS* | | | | Batch ID: | **24038** | Analysis Date: | | 10/8/2010 4:08:14 PM | |
| Diesel Range Organics (DRO) | 5.777 | mg/L | 1.0 | 5 | 0 | 116 | 74 | 157 | | | |
| **Sample ID: LCSD-24038** | | *LCSD* | | | | Batch ID: | **24038** | Analysis Date: | | 10/8/2010 4:42:05 PM | |
| Diesel Range Organics (DRO) | 6.201 | mg/L | 1.0 | 5 | 0 | 124 | 74 | 157 | 7.08 | 23 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** GWM 2,3 **Work Order:** 1010251

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8015B: Gasoline Range** | | | | | | | | | | | |
| **Sample ID: 5ML RB** | | *MBLK* | | | | Batch ID: | **R41562** | Analysis Date: | | 10/14/2010 9:52:47 AM | |
| Gasoline Range Organics (GRO) | ND | mg/L | 0.050 | | | | | | | | |
| **Sample ID: 2.5UG GRO LCS** | | *LCS* | | | | Batch ID: | **R41562** | Analysis Date: | | 10/14/2010 5:50:06 PM | |
| Gasoline Range Organics (GRO) | 0.5524 | mg/L | 0.050 | 0.5 | 0 | 110 | 89.5 | 122 | | | |
| **Sample ID: 2.5UG GRO LCSD** | | *LCSD* | | | | Batch ID: | **R41562** | Analysis Date: | | 10/14/2010 6:19:01 PM | |
| Gasoline Range Organics (GRO) | 0.5456 | mg/L | 0.050 | 0.5 | 0 | 109 | 89.5 | 122 | 1.24 | 10.5 | |
| **Method: EPA Method 8260: Volatiles Short List** | | | | | | | | | | | |
| **Sample ID: b4** | | *MBLK* | | | | Batch ID: | **R41557** | Analysis Date: | | 10/14/2010 1:38:57 PM | |
| Benzene | ND | µg/L | 1.0 | | | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 | | | | | | | | |
| Xylenes, Total | ND | µg/L | 2.0 | | | | | | | | |
| **Sample ID: 5ml rb** | | *MBLK* | | | | Batch ID: | **R41589** | Analysis Date: | | 10/15/2010 10:14:44 AM | |
| Benzene | ND | µg/L | 1.0 | | | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 | | | | | | | | |
| Xylenes, Total | ND | µg/L | 2.0 | | | | | | | | |
| **Sample ID: 100ng lcs** | | *LCS* | | | | Batch ID: | **R41557** | Analysis Date: | | 10/14/2010 1:10:40 PM | |
| Benzene | 19.13 | µg/L | 1.0 | 20 | 0 | 95.6 | 84.6 | 109 | | | |
| Toluene | 19.74 | µg/L | 1.0 | 20 | 0 | 98.7 | 81 | 114 | | | |
| **Sample ID: 100ng lcs** | | *LCS* | | | | Batch ID: | **R41589** | Analysis Date: | | 10/15/2010 11:11:12 AM | |
| Benzene | 19.75 | µg/L | 1.0 | 20 | 0 | 98.8 | 84.6 | 109 | | | |
| Toluene | 20.57 | µg/L | 1.0 | 20 | 0 | 103 | 81 | 114 | | | |
| **Method: EPA Method 6010B: Dissolved Metals** | | | | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R41653** | Analysis Date: | | 10/19/2010 1:48:38 PM | |
| Calcium | ND | mg/L | 1.0 | | | | | | | | |
| Magnesium | ND | mg/L | 1.0 | | | | | | | | |
| Sodium | ND | mg/L | 1.0 | | | | | | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R41653** | Analysis Date: | | 10/19/2010 1:54:42 PM | |
| Calcium | 58.95 | mg/L | 1.0 | 50.5 | 0.0187 | 117 | 80 | 120 | | | |
| Magnesium | 59.45 | mg/L | 1.0 | 50.5 | 0.0159 | 118 | 80 | 120 | | | |
| Sodium | 58.47 | mg/L | 1.0 | 50.5 | 0.0601 | 116 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** GWM 2,3 **Work Order:** 1010251

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA 6010B: Total Recoverable Metals** | | | | | | | | | | | |
| **Sample ID: MB-24164** | | *MBLK* | | | | Batch ID: | **24164** | Analysis Date: | 10/21/2010 10:55:48 AM | | |
| Calcium | ND | mg/L | 1.0 | | | | | | | | |
| Magnesium | ND | mg/L | 1.0 | | | | | | | | |
| Potassium | ND | mg/L | 1.0 | | | | | | | | |
| Sodium | ND | mg/L | 1.0 | | | | | | | | |
| **Sample ID: LCS-24164** | | *LCS* | | | | Batch ID: | **24164** | Analysis Date: | 10/21/2010 10:58:38 AM | | |
| Calcium | 47.75 | mg/L | 1.0 | 50 | 0 | 95.5 | 80 | 120 | | | |
| Magnesium | 49.45 | mg/L | 1.0 | 50 | 0.0308 | 98.8 | 80 | 120 | | | |
| Potassium | 50.86 | mg/L | 1.0 | 50 | 0 | 102 | 80 | 120 | | | |
| Sodium | 51.54 | mg/L | 1.0 | 50 | 0.0319 | 103 | 80 | 120 | | | |
| **Sample ID: LCS-24164** | | *LCS* | | | | Batch ID: | **24164** | Analysis Date: | 10/21/2010 11:01:41 AM | | |
| Calcium | 48.38 | mg/L | 1.0 | 50 | 0 | 96.8 | 80 | 120 | 1.32 | 0 | |
| Magnesium | 50.20 | mg/L | 1.0 | 50 | 0.0308 | 100 | 80 | 120 | 1.50 | 0 | |
| Potassium | 51.83 | mg/L | 1.0 | 50 | 0 | 104 | 80 | 120 | 1.89 | 0 | |
| Sodium | 52.41 | mg/L | 1.0 | 50 | 0.0319 | 105 | 80 | 120 | 1.66 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# Chain-of-Custody Record

Client: Western Refinery Gallup 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: GWM 2,3

Project #: Re-Sample

Project Manager: C Johnson

Sampler: C Johnson

[redacted]

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | [redacted] | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions (F,Cl,$NO_3$,$NO_2$,$PO_4$,$SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | Major Cations, Anions | 8021B + MTBE | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5/4/10 | 0920 | $H_2O$ | GWM-2 | | | 1 | | | X | | | | | | | | | X | X | | | |
| | 0959 | " | GWM-3 | | | 2 | | | | | | | | | | | | | | | | |
| | | | ~~[illegible]~~ | | | | | | | | | | | | | | | | | | | |

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 5/4/10 | 1100 | [signature] | Melissa Watson | 10/5/10 | 1045 |
| Date: | Time: | Relinquished by: | Received by: | Date | Time |

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

COVER LETTER

Friday, November 19, 2010

Cheryl Johnson
Western Refining Southwest, Gallup
Rt. 3 Box 7
Gallup, NM 87301

TEL: (505) 722-3833
FAX (505) 722-0210

RE: 2010 4th Qtr

Order No.: 1011139

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory, Inc. received 7 sample(s) on 11/3/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011139
**Project:** 2010 4th Qtr
**Lab ID:** 1011139-01

**Client Sample ID:** GWM-1
**Collection Date:** 11/2/2010 9:10:00 AM
**Date Received:** 11/3/2010
**Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | 6.0 | 1.0 | | mg/L | 1 | 11/5/2010 2:45:30 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/5/2010 2:45:30 PM |
| Surr: DNOP | 121 | 86.9-151 | | %REC | 1 | 11/5/2010 2:45:30 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.68 | 0.50 | | mg/L | 10 | 11/4/2010 4:01:25 PM |
| Surr: BFB | 203 | 84.5-118 | S | %REC | 10 | 11/4/2010 4:01:25 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 3.5 | 1.0 | | mg/L | 10 | 11/3/2010 5:56:26 PM |
| Chloride | 1300 | 50 | | mg/L | 100 | 11/6/2010 11:51:12 AM |
| Nitrogen, Nitrate (As N) | ND | 1.0 | | mg/L | 10 | 11/3/2010 5:56:26 PM |
| Phosphorus, Orthophosphate (As P) | ND | 5.0 | | mg/L | 10 | 11/3/2010 5:56:26 PM |
| Sulfate | 26 | 5.0 | | mg/L | 10 | 11/3/2010 5:56:26 PM |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/10/2010 12:30:55 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **SNV** |
| Arsenic | ND | 0.20 | | mg/L | 10 | 11/14/2010 1:17:35 PM |
| Barium | 1.3 | 0.20 | | mg/L | 10 | 11/14/2010 1:17:35 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/14/2010 12:22:31 PM |
| Calcium | 330 | 10 | | mg/L | 10 | 11/14/2010 1:17:35 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/14/2010 12:22:31 PM |
| Copper | ND | 0.0060 | | mg/L | 1 | 11/14/2010 12:22:31 PM |
| Iron | 5.2 | 0.40 | | mg/L | 20 | 11/17/2010 6:17:06 PM |
| Lead | 0.0094 | 0.0050 | | mg/L | 1 | 11/14/2010 12:22:31 PM |
| Magnesium | 75 | 1.0 | | mg/L | 1 | 11/14/2010 12:22:31 PM |
| Manganese | 3.0 | 0.020 | | mg/L | 10 | 11/14/2010 1:17:35 PM |
| Potassium | 2.9 | 1.0 | | mg/L | 1 | 11/14/2010 12:22:31 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/14/2010 12:22:31 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/14/2010 12:22:31 PM |
| Sodium | 1100 | 20 | | mg/L | 20 | 11/17/2010 6:17:06 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | 0.14 | 0.020 | | mg/L | 1 | 11/9/2010 12:34:52 PM |
| Barium | 1.4 | 0.10 | | mg/L | 5 | 11/9/2010 1:28:43 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/9/2010 12:34:52 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/9/2010 12:34:52 PM |
| Copper | ND | 0.0060 | | mg/L | 1 | 11/9/2010 12:34:52 PM |
| Iron | 7.9 | 0.50 | | mg/L | 10 | 11/9/2010 2:23:58 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | GWM-1 |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 9:10:00 AM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Lead | 0.0096 | 0.0050 | | mg/L | 1 | 11/9/2010 12:34:52 PM |
| Manganese | 3.0 | 0.010 | | mg/L | 5 | 11/9/2010 1:28:43 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/9/2010 12:34:52 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/9/2010 12:34:52 PM |
| Zinc | 0.025 | 0.020 | | mg/L | 1 | 11/9/2010 12:34:52 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **MMS** |
| Benzene | 6.9 | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Toluene | 2.3 | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Ethylbenzene | 3.5 | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Methyl tert-butyl ether (MTBE) | 62 | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,2,4-Trimethylbenzene | 7.5 | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1-Methylnaphthalene | 11 | 4.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Acetone | ND | 10 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
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- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | GWM-1 |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 9:10:00 AM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-01 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **MMS** |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| n-Butylbenzene | 1.6 | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| n-Propylbenzene | 1.2 | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Xylenes, Total | 22 | 1.5 | | µg/L | 1 | 11/4/2010 2:22:06 PM |
| Surr: 1,2-Dichloroethane-d4 | 99.7 | 77.7-113 | | %REC | 1 | 11/4/2010 2:22:06 PM |
| Surr: 4-Bromofluorobenzene | 108 | 76.4-106 | S | %REC | 1 | 11/4/2010 2:22:06 PM |
| Surr: Dibromofluoromethane | 103 | 91.6-125 | | %REC | 1 | 11/4/2010 2:22:06 PM |
| Surr: Toluene-d8 | 98.0 | 92.3-107 | | %REC | 1 | 11/4/2010 2:22:06 PM |

**Qualifiers:**

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

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011139
**Project:** 2010 4th Qtr
**Lab ID:** 1011139-02

**Client Sample ID:** NAPIS-2
**Collection Date:** 11/2/2010 10:15:00 AM
**Date Received:** 11/3/2010
**Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | 5.1 | 1.0 | | mg/L | 1 | 11/5/2010 3:19:36 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/5/2010 3:19:36 PM |
| Surr: DNOP | 123 | 86.9-151 | | %REC | 1 | 11/5/2010 3:19:36 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.57 | 0.50 | | mg/L | 10 | 11/4/2010 4:30:18 PM |
| Surr: BFB | 106 | 84.5-118 | | %REC | 10 | 11/4/2010 4:30:18 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 1.7 | 1.0 | | mg/L | 10 | 11/3/2010 6:31:15 PM |
| Chloride | 230 | 25 | | mg/L | 50 | 11/3/2010 6:48:40 PM |
| Nitrogen, Nitrite (As N) | ND | 1.0 | | mg/L | 10 | 11/3/2010 6:31:15 PM |
| Nitrogen, Nitrate (As N) | ND | 1.0 | | mg/L | 10 | 11/3/2010 6:31:15 PM |
| Phosphorus, Orthophosphate (As P) | ND | 5.0 | | mg/L | 10 | 11/3/2010 6:31:15 PM |
| Sulfate | 7.8 | 5.0 | | mg/L | 10 | 11/3/2010 6:31:15 PM |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/10/2010 12:32:41 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **SNV** |
| Arsenic | ND | 0.10 | | mg/L | 5 | 11/14/2010 1:20:26 PM |
| Barium | 1.4 | 0.10 | | mg/L | 5 | 11/14/2010 1:20:26 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/14/2010 12:36:51 PM |
| Calcium | 73 | 1.0 | | mg/L | 1 | 11/14/2010 12:36:51 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/14/2010 12:36:51 PM |
| Copper | ND | 0.0060 | | mg/L | 1 | 11/14/2010 12:36:51 PM |
| Iron | 2.9 | 0.10 | | mg/L | 5 | 11/17/2010 6:20:02 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/14/2010 12:36:51 PM |
| Magnesium | 14 | 1.0 | | mg/L | 1 | 11/14/2010 12:36:51 PM |
| Manganese | 1.2 | 0.010 | | mg/L | 5 | 11/14/2010 1:20:26 PM |
| Potassium | ND | 1.0 | | mg/L | 1 | 11/14/2010 12:36:51 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/14/2010 12:36:51 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/14/2010 12:36:51 PM |
| Sodium | 320 | 5.0 | | mg/L | 5 | 11/14/2010 1:20:26 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/9/2010 12:38:58 PM |
| Barium | 1.2 | 0.10 | | mg/L | 5 | 11/9/2010 1:34:23 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/9/2010 12:38:58 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/9/2010 12:38:58 PM |
| Copper | ND | 0.0060 | | mg/L | 1 | 11/9/2010 12:38:58 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | NAPIS-2 |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 10:15:00 AM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: RAGS |
| Iron | 4.2 | 0.25 | | mg/L | 5 | 11/9/2010 1:34:23 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/9/2010 12:38:58 PM |
| Manganese | 1.2 | 0.010 | | mg/L | 5 | 11/9/2010 1:34:23 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/9/2010 12:38:58 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/9/2010 12:38:58 PM |
| Zinc | ND | 0.020 | | mg/L | 1 | 11/9/2010 12:38:58 PM |
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: JDC |
| Acenaphthene | 10 | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Acenaphthylene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Aniline | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Azobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Benz(a)anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Benzo(a)pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Benzo(b)fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Benzo(g,h,i)perylene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Benzo(k)fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Benzoic acid | ND | 20 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Benzyl alcohol | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Bis(2-chloroethoxy)methane | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Bis(2-chloroethyl)ether | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Bis(2-chloroisopropyl)ether | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 4-Bromophenyl phenyl ether | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Butyl benzyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Carbazole | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 4-Chloro-3-methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 4-Chloroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2-Chloronaphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2-Chlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 4-Chlorophenyl phenyl ether | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Chrysene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Di-n-butyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Di-n-octyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Dibenz(a,h)anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Dibenzofuran | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 1,2-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 1,3-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 1,4-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 3,3'-Dichlorobenzidine | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011139
**Project:** 2010 4th Qtr
**Lab ID:** 1011139-02

**Client Sample ID:** NAPIS-2
**Collection Date:** 11/2/2010 10:15:00 AM
**Date Received:** 11/3/2010
**Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: JDC |
| Diethyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Dimethyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2,4-Dichlorophenol | ND | 20 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2,4-Dimethylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 4,6-Dinitro-2-methylphenol | ND | 20 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2,4-Dinitrophenol | ND | 20 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2,4-Dinitrotoluene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2,6-Dinitrotoluene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Fluorene | 11 | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Hexachlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Hexachlorobutadiene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Hexachlorocyclopentadiene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Hexachloroethane | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Isophorone | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2-Methylnaphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2-Methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 3+4-Methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| N-Nitrosodi-n-propylamine | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| N-Nitrosodimethylamine | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| N-Nitrosodiphenylamine | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Naphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2-Nitroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 3-Nitroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 4-Nitroaniline | ND | 20 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Nitrobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2-Nitrophenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 4-Nitrophenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Pentachlorophenol | ND | 20 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Phenanthrene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Phenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Pyridine | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 1,2,4-Trichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2,4,5-Trichlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| 2,4,6-Trichlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:59:55 AM |
| Surr: 2,4,6-Tribromophenol | 65.2 | 17.5-104 | | %REC | 1 | 11/10/2010 11:59:55 AM |
| Surr: 2-Fluorobiphenyl | 66.2 | 30.9-98.9 | | %REC | 1 | 11/10/2010 11:59:55 AM |
| Surr: 2-Fluorophenol | 62.5 | 12.4-90.1 | | %REC | 1 | 11/10/2010 11:59:55 AM |
| Surr: 4-Terphenyl-d14 | 76.1 | 43.5-91.9 | | %REC | 1 | 11/10/2010 11:59:55 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | NAPIS-2 |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 10:15:00 AM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-02 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: **JDC** |
| Surr: Nitrobenzene-d5 | 76.7 | 26.2-108 | | %REC | 1 | 11/10/2010 11:59:55 AM |
| Surr: Phenol-d5 | 47.5 | 11.8-73.1 | | %REC | 1 | 11/10/2010 11:59:55 AM |
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: **MMS** |
| Benzene | 15 | 5.0 | | µg/L | 5 | 11/4/2010 4:12:09 PM |
| Toluene | ND | 5.0 | | µg/L | 5 | 11/4/2010 4:12:09 PM |
| Ethylbenzene | ND | 5.0 | | µg/L | 5 | 11/4/2010 4:12:09 PM |
| Methyl tert-butyl ether (MTBE) | 270 | 7.5 | | µg/L | 5 | 11/4/2010 4:12:09 PM |
| Xylenes, Total | ND | 15 | | µg/L | 5 | 11/4/2010 4:12:09 PM |
| Surr: 1,2-Dichloroethane-d4 | 99.9 | 77.7-113 | | %REC | 5 | 11/4/2010 4:12:09 PM |
| Surr: 4-Bromofluorobenzene | 103 | 76.4-106 | | %REC | 5 | 11/4/2010 4:12:09 PM |
| Surr: Dibromofluoromethane | 102 | 91.6-125 | | %REC | 5 | 11/4/2010 4:12:09 PM |
| Surr: Toluene-d8 | 99.0 | 92.3-107 | | %REC | 5 | 11/4/2010 4:12:09 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011139
**Project:** 2010 4th Qtr
**Lab ID:** 1011139-03

**Client Sample ID:** KA-3
**Collection Date:** 11/2/2010 11:09:00 AM
**Date Received:** 11/3/2010
**Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | 1.7 | 1.0 | | mg/L | 1 | 11/5/2010 3:53:43 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/5/2010 3:53:43 PM |
| Surr: DNOP | 122 | 86.9-151 | | %REC | 1 | 11/5/2010 3:53:43 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | 0.68 | 0.25 | | mg/L | 5 | 11/4/2010 4:59:14 PM |
| Surr: BFB | 108 | 84.5-118 | | %REC | 5 | 11/4/2010 4:59:14 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 1.7 | 1.0 | | mg/L | 10 | 11/3/2010 7:06:04 PM |
| Chloride | 260 | 25 | | mg/L | 50 | 11/3/2010 7:23:29 PM |
| Nitrogen, Nitrite (As N) | ND | 1.0 | | mg/L | 10 | 11/3/2010 7:06:04 PM |
| Nitrogen, Nitrate (As N) | ND | 1.0 | | mg/L | 10 | 11/3/2010 7:06:04 PM |
| Phosphorus, Orthophosphate (As P) | ND | 5.0 | | mg/L | 10 | 11/3/2010 7:06:04 PM |
| Sulfate | 38 | 5.0 | | mg/L | 10 | 11/3/2010 7:06:04 PM |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/10/2010 12:34:26 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **SNV** |
| Arsenic | ND | 0.10 | | mg/L | 5 | 11/14/2010 1:23:17 PM |
| Barium | 0.62 | 0.020 | | mg/L | 1 | 11/14/2010 12:40:51 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/14/2010 12:40:51 PM |
| Calcium | 81 | 1.0 | | mg/L | 1 | 11/14/2010 12:40:51 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/14/2010 12:40:51 PM |
| Copper | ND | 0.0060 | | mg/L | 1 | 11/14/2010 12:40:51 PM |
| Iron | 0.32 | 0.020 | | mg/L | 1 | 11/17/2010 6:24:43 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/14/2010 12:40:51 PM |
| Magnesium | 14 | 1.0 | | mg/L | 1 | 11/14/2010 12:40:51 PM |
| Manganese | 1.4 | 0.010 | | mg/L | 5 | 11/14/2010 1:23:17 PM |
| Potassium | ND | 1.0 | | mg/L | 1 | 11/14/2010 12:40:51 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/14/2010 12:40:51 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/14/2010 12:40:51 PM |
| Sodium | 330 | 5.0 | | mg/L | 5 | 11/14/2010 1:23:17 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/9/2010 12:42:51 PM |
| Barium | 0.60 | 0.020 | | mg/L | 1 | 11/9/2010 12:42:51 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/9/2010 12:42:51 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/9/2010 12:42:51 PM |
| Copper | ND | 0.0060 | | mg/L | 1 | 11/9/2010 12:42:51 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011139
**Project:** 2010 4th Qtr
**Lab ID:** 1011139-03

**Client Sample ID:** KA-3
**Collection Date:** 11/2/2010 11:09:00 AM
**Date Received:** 11/3/2010
**Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: RAGS |
| Iron | 1.2 | 0.25 | | mg/L | 5 | 11/9/2010 1:37:33 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/9/2010 12:42:51 PM |
| Manganese | 1.4 | 0.010 | | mg/L | 5 | 11/9/2010 1:37:33 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/9/2010 12:42:51 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/9/2010 12:42:51 PM |
| Zinc | ND | 0.020 | | mg/L | 1 | 11/9/2010 12:42:51 PM |
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: JDC |
| Acenaphthene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Acenaphthylene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Aniline | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Azobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Benz(a)anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Benzo(a)pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Benzo(b)fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Benzo(g,h,i)perylene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Benzo(k)fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Benzoic acid | ND | 20 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Benzyl alcohol | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Bis(2-chloroethoxy)methane | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Bis(2-chloroethyl)ether | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Bis(2-chloroisopropyl)ether | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 4-Bromophenyl phenyl ether | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Butyl benzyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Carbazole | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 4-Chloro-3-methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 4-Chloroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2-Chloronaphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2-Chlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 4-Chlorophenyl phenyl ether | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Chrysene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Di-n-butyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Di-n-octyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Dibenz(a,h)anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Dibenzofuran | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 1,2-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 1,3-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 1,4-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 3,3'-Dichlorobenzidine | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011139
**Project:** 2010 4th Qtr
**Lab ID:** 1011139-03

**Client Sample ID:** KA-3
**Collection Date:** 11/2/2010 11:09:00 AM
**Date Received:** 11/3/2010
**Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: JDC |
| Diethyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Dimethyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2,4-Dichlorophenol | ND | 20 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2,4-Dimethylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 4,6-Dinitro-2-methylphenol | ND | 20 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2,4-Dinitrophenol | ND | 20 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2,4-Dinitrotoluene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2,6-Dinitrotoluene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Fluorene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Hexachlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Hexachlorobutadiene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Hexachlorocyclopentadiene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Hexachloroethane | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Isophorone | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2-Methylnaphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2-Methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 3+4-Methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| N-Nitrosodi-n-propylamine | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| N-Nitrosodimethylamine | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| N-Nitrosodiphenylamine | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Naphthalene | 13 | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2-Nitroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 3-Nitroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 4-Nitroaniline | ND | 20 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Nitrobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2-Nitrophenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 4-Nitrophenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Pentachlorophenol | ND | 20 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Phenanthrene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Phenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Pyridine | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 1,2,4-Trichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2,4,5-Trichlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| 2,4,6-Trichlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:29:34 PM |
| Surr: 2,4,6-Tribromophenol | 68.5 | 17.5-104 | | %REC | 1 | 11/10/2010 12:29:34 PM |
| Surr: 2-Fluorobiphenyl | 72.3 | 30.9-98.9 | | %REC | 1 | 11/10/2010 12:29:34 PM |
| Surr: 2-Fluorophenol | 57.1 | 12.4-90.1 | | %REC | 1 | 11/10/2010 12:29:34 PM |
| Surr: 4-Terphenyl-d14 | 72.8 | 43.5-91.9 | | %REC | 1 | 11/10/2010 12:29:34 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | KA-3 |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 11:09:00 AM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-03 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: **JDC** |
| Surr: Nitrobenzene-d5 | 76.1 | 26.2-108 | | %REC | 1 | 11/10/2010 12:29:34 PM |
| Surr: Phenol-d5 | 43.7 | 11.8-73.1 | | %REC | 1 | 11/10/2010 12:29:34 PM |
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: **MMS** |
| Benzene | 230 | 10 | | µg/L | 10 | 11/4/2010 5:07:04 PM |
| Toluene | ND | 10 | | µg/L | 10 | 11/4/2010 5:07:04 PM |
| Ethylbenzene | 14 | 10 | | µg/L | 10 | 11/4/2010 5:07:04 PM |
| Methyl tert-butyl ether (MTBE) | 100 | 15 | | µg/L | 10 | 11/4/2010 5:07:04 PM |
| Xylenes, Total | ND | 30 | | µg/L | 10 | 11/4/2010 5:07:04 PM |
| Surr: 1,2-Dichloroethane-d4 | 101 | 77.7-113 | | %REC | 10 | 11/4/2010 5:07:04 PM |
| Surr: 4-Bromofluorobenzene | 96.1 | 76.4-106 | | %REC | 10 | 11/4/2010 5:07:04 PM |
| Surr: Dibromofluoromethane | 105 | 91.6-125 | | %REC | 10 | 11/4/2010 5:07:04 PM |
| Surr: Toluene-d8 | 96.9 | 92.3-107 | | %REC | 10 | 11/4/2010 5:07:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | NAPIS-3 |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 12:04:00 PM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-04 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/5/2010 4:27:51 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/5/2010 4:27:51 PM |
| Surr: DNOP | 119 | 86.9-151 | | %REC | 1 | 11/5/2010 4:27:51 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 0.050 | | mg/L | 1 | 11/4/2010 5:28:09 PM |
| Surr: BFB | 99.9 | 84.5-118 | | %REC | 1 | 11/4/2010 5:28:09 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.48 | 0.10 | | mg/L | 1 | 11/3/2010 7:40:53 PM |
| Chloride | 1100 | 50 | | mg/L | 100 | 11/6/2010 12:08:37 PM |
| Nitrogen, Nitrite (As N) | ND | 2.0 | | mg/L | 20 | 11/3/2010 7:58:18 PM |
| Nitrogen, Nitrate (As N) | 18 | 2.0 | | mg/L | 20 | 11/3/2010 7:58:18 PM |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | | mg/L | 1 | 11/3/2010 7:40:53 PM |
| Sulfate | 430 | 10 | | mg/L | 20 | 11/3/2010 7:58:18 PM |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/10/2010 12:36:12 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **SNV** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Barium | 0.081 | 0.020 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Calcium | 42 | 1.0 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Copper | ND | 0.0060 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Iron | 0.025 | 0.020 | | mg/L | 1 | 11/17/2010 6:28:50 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Magnesium | 7.0 | 1.0 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Manganese | 0.010 | 0.0020 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Potassium | 4.2 | 1.0 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/14/2010 12:44:51 PM |
| Sodium | 990 | 20 | | mg/L | 20 | 11/14/2010 1:26:07 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/9/2010 12:46:56 PM |
| Barium | 0.096 | 0.020 | | mg/L | 1 | 11/9/2010 12:46:56 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/9/2010 12:46:56 PM |
| Chromium | 0.0075 | 0.0060 | | mg/L | 1 | 11/9/2010 12:46:56 PM |
| Copper | 0.012 | 0.0060 | | mg/L | 1 | 11/9/2010 12:46:56 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | NAPIS-3 |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 12:04:00 PM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-04 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: RAGS |
| Iron | 2.6 | 0.25 | | mg/L | 5 | 11/9/2010 1:40:39 PM |
| Lead | 0.011 | 0.0050 | | mg/L | 1 | 11/9/2010 12:46:56 PM |
| Manganese | 0.12 | 0.0020 | | mg/L | 1 | 11/9/2010 12:46:56 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/9/2010 12:46:56 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/9/2010 12:46:56 PM |
| Zinc | 0.59 | 0.020 | | mg/L | 1 | 11/9/2010 12:46:56 PM |
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: JDC |
| Acenaphthene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Acenaphthylene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Aniline | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Azobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Benz(a)anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Benzo(a)pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Benzo(b)fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Benzo(g,h,i)perylene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Benzo(k)fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Benzoic acid | ND | 20 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Benzyl alcohol | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Bis(2-chloroethoxy)methane | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Bis(2-chloroethyl)ether | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Bis(2-chloroisopropyl)ether | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 4-Bromophenyl phenyl ether | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Butyl benzyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Carbazole | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 4-Chloro-3-methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 4-Chloroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2-Chloronaphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2-Chlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 4-Chlorophenyl phenyl ether | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Chrysene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Di-n-butyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Di-n-octyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Dibenz(a,h)anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Dibenzofuran | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 1,2-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 1,3-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 1,4-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 3,3'-Dichlorobenzidine | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011139
**Project:** 2010 4th Qtr
**Lab ID:** 1011139-04

**Client Sample ID:** NAPIS-3
**Collection Date:** 11/2/2010 12:04:00 PM
**Date Received:** 11/3/2010
**Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: JDC |
| Diethyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Dimethyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2,4-Dichlorophenol | ND | 20 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2,4-Dimethylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 4,6-Dinitro-2-methylphenol | ND | 20 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2,4-Dinitrophenol | ND | 20 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2,4-Dinitrotoluene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2,6-Dinitrotoluene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Fluorene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Hexachlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Hexachlorobutadiene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Hexachlorocyclopentadiene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Hexachloroethane | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Isophorone | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2-Methylnaphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2-Methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 3+4-Methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| N-Nitrosodi-n-propylamine | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| N-Nitrosodimethylamine | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| N-Nitrosodiphenylamine | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Naphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2-Nitroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 3-Nitroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 4-Nitroaniline | ND | 20 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Nitrobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2-Nitrophenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 4-Nitrophenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Pentachlorophenol | ND | 20 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Phenanthrene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Phenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Pyridine | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 1,2,4-Trichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2,4,5-Trichlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| 2,4,6-Trichlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 12:59:21 PM |
| Surr: 2,4,6-Tribromophenol | 70.3 | 17.5-104 | | %REC | 1 | 11/10/2010 12:59:21 PM |
| Surr: 2-Fluorobiphenyl | 70.9 | 30.9-98.9 | | %REC | 1 | 11/10/2010 12:59:21 PM |
| Surr: 2-Fluorophenol | 62.6 | 12.4-90.1 | | %REC | 1 | 11/10/2010 12:59:21 PM |
| Surr: 4-Terphenyl-d14 | 68.4 | 43.5-91.9 | | %REC | 1 | 11/10/2010 12:59:21 PM |

**Qualifiers:**

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- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | NAPIS-3 |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 12:04:00 PM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-04 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: **JDC** |
| Surr: Nitrobenzene-d5 | 87.6 | 26.2-108 | | %REC | 1 | 11/10/2010 12:59:21 PM |
| Surr: Phenol-d5 | 46.6 | 11.8-73.1 | | %REC | 1 | 11/10/2010 12:59:21 PM |
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: **MMS** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 6:01:52 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 6:01:52 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 6:01:52 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.5 | | µg/L | 1 | 11/4/2010 6:01:52 PM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/4/2010 6:01:52 PM |
| Surr: 1,2-Dichloroethane-d4 | 97.2 | 77.7-113 | | %REC | 1 | 11/4/2010 6:01:52 PM |
| Surr: 4-Bromofluorobenzene | 111 | 76.4-106 | S | %REC | 1 | 11/4/2010 6:01:52 PM |
| Surr: Dibromofluoromethane | 98.8 | 91.6-125 | | %REC | 1 | 11/4/2010 6:01:52 PM |
| Surr: Toluene-d8 | 98.2 | 92.3-107 | | %REC | 1 | 11/4/2010 6:01:52 PM |

**Qualifiers:**

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- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011139
**Project:** 2010 4th Qtr
**Lab ID:** 1011139-05

**Client Sample ID:** NAPIS-1
**Collection Date:** 11/2/2010 3:05:00 PM
**Date Received:** 11/3/2010
**Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: DIESEL RANGE** | | | | | | Analyst: **JB** |
| Diesel Range Organics (DRO) | ND | 1.0 | | mg/L | 1 | 11/5/2010 5:01:41 PM |
| Motor Oil Range Organics (MRO) | ND | 5.0 | | mg/L | 1 | 11/5/2010 5:01:41 PM |
| Surr: DNOP | 120 | 86.9-151 | | %REC | 1 | 11/5/2010 5:01:41 PM |
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 0.050 | | mg/L | 1 | 11/4/2010 5:57:11 PM |
| Surr: BFB | 100 | 84.5-118 | | %REC | 1 | 11/4/2010 5:57:11 PM |
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **SRM** |
| Fluoride | 0.96 | 0.10 | | mg/L | 1 | 11/3/2010 8:50:32 PM |
| Chloride | 200 | 10 | | mg/L | 20 | 11/3/2010 9:07:57 PM |
| Nitrogen, Nitrite (As N) | ND | 2.0 | | mg/L | 20 | 11/3/2010 9:07:57 PM |
| Nitrogen, Nitrate (As N) | 6.9 | 0.10 | | mg/L | 1 | 11/3/2010 8:50:32 PM |
| Phosphorus, Orthophosphate (As P) | ND | 0.50 | | mg/L | 1 | 11/3/2010 8:50:32 PM |
| Sulfate | 98 | 10 | | mg/L | 20 | 11/3/2010 9:07:57 PM |
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **ELS** |
| Mercury | ND | 0.00020 | | mg/L | 1 | 11/10/2010 12:37:58 PM |
| **EPA METHOD 6010B: DISSOLVED METALS** | | | | | | Analyst: **SNV** |
| Arsenic | ND | 0.10 | | mg/L | 5 | 11/14/2010 1:28:56 PM |
| Barium | 0.13 | 0.020 | | mg/L | 1 | 11/14/2010 12:48:49 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/14/2010 12:48:49 PM |
| Calcium | 75 | 5.0 | | mg/L | 5 | 11/14/2010 1:28:56 PM |
| Chromium | ND | 0.0060 | | mg/L | 1 | 11/14/2010 12:48:49 PM |
| Copper | ND | 0.0060 | | mg/L | 1 | 11/14/2010 12:48:49 PM |
| Iron | 0.057 | 0.020 | | mg/L | 1 | 11/17/2010 6:42:00 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/14/2010 12:48:49 PM |
| Magnesium | 14 | 5.0 | | mg/L | 5 | 11/14/2010 1:28:56 PM |
| Manganese | 0.016 | 0.0020 | | mg/L | 1 | 11/14/2010 12:48:49 PM |
| Potassium | ND | 5.0 | | mg/L | 5 | 11/14/2010 1:28:56 PM |
| Selenium | ND | 0.25 | | mg/L | 5 | 11/14/2010 1:28:56 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/14/2010 12:48:49 PM |
| Sodium | 420 | 5.0 | | mg/L | 5 | 11/14/2010 1:28:56 PM |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **RAGS** |
| Arsenic | ND | 0.020 | | mg/L | 1 | 11/9/2010 12:51:09 PM |
| Barium | 0.26 | 0.020 | | mg/L | 1 | 11/9/2010 12:51:09 PM |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 11/9/2010 12:51:09 PM |
| Chromium | 0.0062 | 0.0060 | | mg/L | 1 | 11/9/2010 12:51:09 PM |
| Copper | ND | 0.0060 | | mg/L | 1 | 11/9/2010 12:51:09 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | NAPIS-1 |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 3:05:00 PM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-05 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: RAGS |
| Iron | 6.4 | 0.50 | | mg/L | 10 | 11/9/2010 2:26:58 PM |
| Lead | ND | 0.0050 | | mg/L | 1 | 11/9/2010 12:51:09 PM |
| Manganese | 0.16 | 0.0020 | | mg/L | 1 | 11/9/2010 12:51:09 PM |
| Selenium | ND | 0.050 | | mg/L | 1 | 11/9/2010 12:51:09 PM |
| Silver | ND | 0.0050 | | mg/L | 1 | 11/9/2010 12:51:09 PM |
| Zinc | 0.027 | 0.020 | | mg/L | 1 | 11/9/2010 12:51:09 PM |
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: JDC |
| Acenaphthene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Acenaphthylene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Aniline | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Azobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Benz(a)anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Benzo(a)pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Benzo(b)fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Benzo(g,h,i)perylene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Benzo(k)fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Benzoic acid | ND | 20 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Benzyl alcohol | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Bis(2-chloroethoxy)methane | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Bis(2-chloroethyl)ether | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Bis(2-chloroisopropyl)ether | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 4-Bromophenyl phenyl ether | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Butyl benzyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Carbazole | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 4-Chloro-3-methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 4-Chloroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2-Chloronaphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2-Chlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 4-Chlorophenyl phenyl ether | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Chrysene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Di-n-butyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Di-n-octyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Dibenz(a,h)anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Dibenzofuran | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 1,2-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 1,3-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 1,4-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 3,3'-Dichlorobenzidine | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011139
**Project:** 2010 4th Qtr
**Lab ID:** 1011139-05

**Client Sample ID:** NAPIS-1
**Collection Date:** 11/2/2010 3:05:00 PM
**Date Received:** 11/3/2010
**Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: JDC |
| Diethyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Dimethyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2,4-Dichlorophenol | ND | 20 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2,4-Dimethylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 4,6-Dinitro-2-methylphenol | ND | 20 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2,4-Dinitrophenol | ND | 20 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2,4-Dinitrotoluene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2,6-Dinitrotoluene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Fluorene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Hexachlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Hexachlorobutadiene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Hexachlorocyclopentadiene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Hexachloroethane | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Isophorone | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2-Methylnaphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2-Methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 3+4-Methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| N-Nitrosodi-n-propylamine | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| N-Nitrosodimethylamine | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| N-Nitrosodiphenylamine | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Naphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2-Nitroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 3-Nitroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 4-Nitroaniline | ND | 20 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Nitrobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2-Nitrophenol | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 4-Nitrophenol | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Pentachlorophenol | ND | 20 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Phenanthrene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Phenol | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Pyridine | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 1,2,4-Trichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2,4,5-Trichlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| 2,4,6-Trichlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 1:29:02 PM |
| Surr: 2,4,6-Tribromophenol | 74.1 | 17.5-104 | | %REC | 1 | 11/10/2010 1:29:02 PM |
| Surr: 2-Fluorobiphenyl | 69.8 | 30.9-98.9 | | %REC | 1 | 11/10/2010 1:29:02 PM |
| Surr: 2-Fluorophenol | 56.9 | 12.4-90.1 | | %REC | 1 | 11/10/2010 1:29:02 PM |
| Surr: 4-Terphenyl-d14 | 74.1 | 43.5-91.9 | | %REC | 1 | 11/10/2010 1:29:02 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | NAPIS-1 |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 3:05:00 PM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-05 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: **JDC** |
| Surr: Nitrobenzene-d5 | 85.3 | 26.2-108 | | %REC | 1 | 11/10/2010 1:29:02 PM |
| Surr: Phenol-d5 | 42.6 | 11.8-73.1 | | %REC | 1 | 11/10/2010 1:29:02 PM |
| **EPA METHOD 8260: VOLATILES SHORT LIST** | | | | | | Analyst: **MMS** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 6:56:48 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 6:56:48 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 6:56:48 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.5 | | µg/L | 1 | 11/4/2010 6:56:48 PM |
| Xylenes, Total | ND | 3.0 | | µg/L | 1 | 11/4/2010 6:56:48 PM |
| Surr: 1,2-Dichloroethane-d4 | 96.2 | 77.7-113 | | %REC | 1 | 11/4/2010 6:56:48 PM |
| Surr: 4-Bromofluorobenzene | 105 | 76.4-106 | | %REC | 1 | 11/4/2010 6:56:48 PM |
| Surr: Dibromofluoromethane | 98.8 | 91.6-125 | | %REC | 1 | 11/4/2010 6:56:48 PM |
| Surr: Toluene-d8 | 97.6 | 92.3-107 | | %REC | 1 | 11/4/2010 6:56:48 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | Field Blank |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 9:00:00 AM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-06 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 0.050 | | mg/L | 1 | 11/4/2010 6:26:09 PM |
| Surr: BFB | 101 | 84.5-118 | | %REC | 1 | 11/4/2010 6:26:09 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: MMS |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Acetone | ND | 10 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

| | | | |
|---|---|---|---|
| **CLIENT:** | Western Refining Southwest, Gallup | **Client Sample ID:** | Field Blank |
| **Lab Order:** | 1011139 | **Collection Date:** | 11/2/2010 9:00:00 AM |
| **Project:** | 2010 4th Qtr | **Date Received:** | 11/3/2010 |
| **Lab ID:** | 1011139-06 | **Matrix:** | AQUEOUS |

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **MMS** |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/4/2010 7:51:52 PM |
| Surr: 1,2-Dichloroethane-d4 | 96.0 | 77.7-113 | | %REC | 1 | 11/4/2010 7:51:52 PM |
| Surr: 4-Bromofluorobenzene | 105 | 76.4-106 | | %REC | 1 | 11/4/2010 7:51:52 PM |
| Surr: Dibromofluoromethane | 99.8 | 91.6-125 | | %REC | 1 | 11/4/2010 7:51:52 PM |
| Surr: Toluene-d8 | 98.0 | 92.3-107 | | %REC | 1 | 11/4/2010 7:51:52 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011139
**Project:** 2010 4th Qtr
**Lab ID:** 1011139-07

**Client Sample ID:** Trip blank
**Collection Date:**
**Date Received:** 11/3/2010
**Matrix:** TRIP BLANK

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8015B: GASOLINE RANGE** | | | | | | Analyst: **NSB** |
| Gasoline Range Organics (GRO) | ND | 0.050 | | mg/L | 1 | 11/4/2010 6:55:10 PM |
| Surr: BFB | 101 | 84.5-118 | | %REC | 1 | 11/4/2010 6:55:10 PM |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **MMS** |
| Benzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Toluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Acetone | ND | 10 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Bromodichloromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Bromoform | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 2-Butanone | ND | 10 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Chloroform | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *19-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011139
**Project:** 2010 4th Qtr
**Lab ID:** 1011139-07

**Client Sample ID:** Trip blank
**Collection Date:**
**Date Received:** 11/3/2010
**Matrix:** TRIP BLANK

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **MMS** |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| n-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Styrene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 11/4/2010 8:19:19 PM |
| Surr: 1,2-Dichloroethane-d4 | 95.8 | 77.7-113 | | %REC | 1 | 11/4/2010 8:19:19 PM |
| Surr: 4-Bromofluorobenzene | 96.1 | 76.4-106 | | %REC | 1 | 11/4/2010 8:19:19 PM |
| Surr: Dibromofluoromethane | 96.8 | 91.6-125 | | %REC | 1 | 11/4/2010 8:19:19 PM |
| Surr: Toluene-d8 | 100 | 92.3-107 | | %REC | 1 | 11/4/2010 8:19:19 PM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# LABORATORY ANALYTICAL REPORT

**Client:** Hall Environmental
**Project:** 1011139
**Lab ID:** B10110534-001
**Client Sample ID** 1011139-01C-1E, GWM-1

**Report Date:** 11/10/10
**Collection Date:** 11/02/10 09:10
**DateReceived:** 11/04/10
**Matrix:** Aqueous

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|---|---|---|---|---|---|---|---|
| **METALS, DISSOLVED** | | | | | | | |
| Uranium | 0.007 | mg/L | | 0.001 | | SW6020 | 11/08/10 18:53 / jjw |
| **METALS, TOTAL** | | | | | | | |
| Uranium | 0.009 | mg/L | | 0.001 | | SW6020 | 11/09/10 05:58 / jjw |

**Report Definitions:**
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

# LABORATORY ANALYTICAL REPORT

**Client:** Hall Environmental
**Project:** 1011139
**Lab ID:** B10110534-002
**Client Sample ID** 1011139-02C-02E, NAPIS-2

**Report Date:** 11/10/10
**Collection Date:** 11/02/10 10:15
**DateReceived:** 11/04/10
**Matrix:** Aqueous

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|---|---|---|---|---|---|---|---|
| **METALS, DISSOLVED** | | | | | | | |
| Uranium | ND | mg/L | | 0.001 | | SW6020 | 11/08/10 19:29 / jjw |
| **METALS, TOTAL** | | | | | | | |
| Uranium | ND | mg/L | | 0.001 | | SW6020 | 11/09/10 06:02 / jjw |

**Report Definitions:**
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

# LABORATORY ANALYTICAL REPORT

**Client:** Hall Environmental
**Project:** 1011139
**Lab ID:** B10110534-003
**Client Sample ID** 1011139-03C-03E, KA-3

**Report Date:** 11/10/10
**Collection Date:** 11/02/10 11:09
**DateReceived:** 11/04/10
**Matrix:** Aqueous

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|---|---|---|---|---|---|---|---|
| **METALS, DISSOLVED** | | | | | | | |
| Uranium | 0.002 | mg/L | | 0.001 | | SW6020 | 11/08/10 19:33 / jjw |
| **METALS, TOTAL** | | | | | | | |
| Uranium | 0.002 | mg/L | | 0.001 | | SW6020 | 11/09/10 06:06 / jjw |

**Report Definitions:**
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

# LABORATORY ANALYTICAL REPORT

**Client:** Hall Environmental
**Project:** 1011139
**Lab ID:** B10110534-004
**Client Sample ID** 1011139-04C-04E, NAPIS-3

**Report Date:** 11/10/10
**Collection Date:** 11/02/10 12:04
**DateReceived:** 11/04/10
**Matrix:** Aqueous

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|---|---|---|---|---|---|---|---|
| **METALS, DISSOLVED** | | | | | | | |
| Uranium | 0.035 | mg/L | | 0.001 | | SW6020 | 11/08/10 19:42 / jjw |
| **METALS, TOTAL** | | | | | | | |
| Uranium | 0.032 | mg/L | | 0.001 | | SW6020 | 11/09/10 06:10 / jjw |

**Report Definitions:**
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

# LABORATORY ANALYTICAL REPORT

**Client:** Hall Environmental
**Project:** 1011139
**Lab ID:** B10110534-005
**Client Sample ID** 1011139-05C-05E, NAPIS-1

**Report Date:** 11/10/10
**Collection Date:** 11/02/10 15:05
**DateReceived:** 11/04/10
**Matrix:** Aqueous

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|---|---|---|---|---|---|---|---|
| **METALS, DISSOLVED** | | | | | | | |
| Uranium | 0.034 | mg/L | | 0.001 | | SW6020 | 11/08/10 19:46 / jjw |
| **METALS, TOTAL** | | | | | | | |
| Uranium | 0.045 | mg/L | | 0.001 | | SW6020 | 11/09/10 06:14 / jjw |

**Report Definitions:**
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

# QA/QC Summary Report

**Client:** Hall Environmental
**Project:** 1011139

**Report Date:** 11/10/10
**Work Order:** B10110534

| Analyte | Count | Result | Units | RL | %REC | Low Limit | High Limit | RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| **Method: SW6020** | | | | | | | | | Analytical Run: ICPMS202-B_101108A | |
| **Sample ID: ICSA-ME091229B** | | Interference Check Sample A | | | | | | | 11/08/10 13:20 | |
| Uranium | | 9.00E-06 | mg/L | 0.00030 | | | | | | |
| **Sample ID: ICSAB-ME091229B, 10** | | Interference Check Sample AB | | | | | | | 11/08/10 13:24 | |
| Uranium | | 5.00E-06 | mg/L | 0.00030 | | 0 | 0 | | | |
| **Sample ID: QCS - 100607A,10072** | | Initial Calibration Verification Standard | | | | | | | 11/08/10 14:05 | |
| Uranium | | 0.0217 | mg/L | 0.00030 | 109 | 90 | 110 | | | |
| **Method: SW6020** | | | | | | | | | Batch: 50323 | |
| **Sample ID: MB-50323** | | Method Blank | | | | Run: ICPMS202-B_101108A | | | 11/09/10 05:09 | |
| Uranium | | ND | mg/L | 2E-05 | | | | | | |
| **Sample ID: B10110503-001ADIL** | | Serial Dilution | | | | Run: ICPMS202-B_101108A | | | 11/09/10 05:17 | |
| Uranium | | ND | mg/L | 0.0010 | | 0 | 0 | | 10 | |
| **Sample ID: LCS-50323** | | Laboratory Control Sample | | | | Run: ICPMS202-B_101108A | | | 11/09/10 05:21 | |
| Uranium | | 0.495 | mg/L | 0.0010 | 99 | 85 | 115 | | | |
| **Sample ID: B10110503-001AMS3** | | Sample Matrix Spike | | | | Run: ICPMS202-B_101108A | | | 11/09/10 05:42 | |
| Uranium | | 0.537 | mg/L | 0.0010 | 107 | 75 | 125 | | | |
| **Sample ID: B10110503-001AMSD3** | | Sample Matrix Spike Duplicate | | | | Run: ICPMS202-B_101108A | | | 11/09/10 05:46 | |
| Uranium | | 0.560 | mg/L | 0.0010 | 112 | 75 | 125 | 4.1 | 20 | |
| **Method: SW6020** | | | | | | | | | Batch: R156853 | |
| **Sample ID: B10110534-001BMS** | | Sample Matrix Spike | | | | Run: ICPMS202-B_101108A | | | 11/08/10 19:13 | |
| Uranium | | 0.311 | mg/L | 0.0010 | 122 | 75 | 125 | | | |
| **Sample ID: B10110534-001BMSD** | | Sample Matrix Spike Duplicate | | | | Run: ICPMS202-B_101108A | | | 11/08/10 19:17 | |
| Uranium | | 0.300 | mg/L | 0.0010 | 117 | 75 | 125 | 3.6 | 20 | |
| **Sample ID: B10110534-003BDIL** | | Serial Dilution | | | | Run: ICPMS202-B_101108A | | | 11/08/10 19:38 | |
| Uranium | | 0.00242 | mg/L | 0.0010 | | 0 | 0 | | | |
| **Sample ID: LFB** | | Laboratory Fortified Blank | | | | Run: ICPMS202-B_101108A | | | 11/08/10 14:13 | |
| Uranium | | 0.0554 | mg/L | 0.00030 | 111 | 85 | 115 | | | |
| **Sample ID: LRB** | | Method Blank | | | | Run: ICPMS202-B_101108A | | | 11/08/10 14:42 | |
| Uranium | | ND | mg/L | 2E-05 | | | | | | |

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** 2010 4th Qtr **Work Order:** 1011139

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 300.0: Anions** | | | | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R41948** | Analysis Date: | 11/3/2010 10:23:47 AM | | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Nitrogen, Nitrite (As N) | ND | mg/L | 0.10 | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | mg/L | 0.10 | | | | | | | | |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R41948** | Analysis Date: | 11/4/2010 2:38:45 AM | | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Nitrogen, Nitrite (As N) | ND | mg/L | 0.10 | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | mg/L | 0.10 | | | | | | | | |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R41989** | Analysis Date: | 11/5/2010 12:38:19 PM | | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Nitrogen, Nitrite (As N) | ND | mg/L | 0.10 | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | mg/L | 0.10 | | | | | | | | |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R41989** | Analysis Date: | 11/6/2010 4:18:30 AM | | |
| Fluoride | ND | mg/L | 0.10 | | | | | | | | |
| Chloride | ND | mg/L | 0.50 | | | | | | | | |
| Nitrogen, Nitrite (As N) | ND | mg/L | 0.10 | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | mg/L | 0.10 | | | | | | | | |
| Phosphorus, Orthophosphate (As P) | ND | mg/L | 0.50 | | | | | | | | |
| Sulfate | ND | mg/L | 0.50 | | | | | | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R41948** | Analysis Date: | 11/3/2010 10:41:12 AM | | |
| Fluoride | 0.4754 | mg/L | 0.10 | 0.5 | 0 | 95.1 | 90 | 110 | | | |
| Chloride | 4.846 | mg/L | 0.50 | 5 | 0 | 96.9 | 90 | 110 | | | |
| Nitrogen, Nitrite (As N) | 0.9803 | mg/L | 0.10 | 1 | 0 | 98.0 | 90 | 110 | | | |
| Nitrogen, Nitrate (As N) | 2.430 | mg/L | 0.10 | 2.5 | 0 | 97.2 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P) | 4.897 | mg/L | 0.50 | 5 | 0 | 97.9 | 90 | 110 | | | |
| Sulfate | 9.858 | mg/L | 0.50 | 10 | 0 | 98.6 | 90 | 110 | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R41948** | Analysis Date: | 11/4/2010 2:56:09 AM | | |
| Fluoride | 0.5329 | mg/L | 0.10 | 0.5 | 0 | 107 | 90 | 110 | | | |
| Chloride | 5.011 | mg/L | 0.50 | 5 | 0 | 100 | 90 | 110 | | | |
| Nitrogen, Nitrite (As N) | 1.042 | mg/L | 0.10 | 1 | 0 | 104 | 90 | 110 | | | |
| Nitrogen, Nitrate (As N) | 2.510 | mg/L | 0.10 | 2.5 | 0 | 100 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P) | 5.226 | mg/L | 0.50 | 5 | 0 | 105 | 90 | 110 | | | |
| Sulfate | 10.13 | mg/L | 0.50 | 10 | 0 | 101 | 90 | 110 | | | |
| **Sample ID: LCS-b** | | *LCS* | | | | Batch ID: | **R41989** | Analysis Date: | 11/6/2010 12:49:34 AM | | |
| Fluoride | 0.5224 | mg/L | 0.10 | 0.5 | 0 | 104 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** 2010 4th Qtr **Work Order:** 1011139

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 300.0: Anions** | | | | | | | | | | | |
| **Sample ID: LCS-b** | | *LCS* | | | | Batch ID: | **R41989** | Analysis Date: | | 11/6/2010 12:49:34 AM | |
| Chloride | 4.906 | mg/L | 0.50 | 5 | 0 | 98.1 | 90 | 110 | | | |
| Nitrogen, Nitrite (As N) | 1.028 | mg/L | 0.10 | 1 | 0 | 103 | 90 | 110 | | | |
| Nitrogen, Nitrate (As N) | 2.468 | mg/L | 0.10 | 2.5 | 0 | 98.7 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P) | 5.028 | mg/L | 0.50 | 5 | 0 | 101 | 90 | 110 | | | |
| Sulfate | 9.937 | mg/L | 0.50 | 10 | 0 | 99.4 | 90 | 110 | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R41989** | Analysis Date: | | 11/6/2010 4:35:55 AM | |
| Fluoride | 0.4977 | mg/L | 0.10 | 0.5 | 0 | 99.5 | 90 | 110 | | | |
| Chloride | 4.902 | mg/L | 0.50 | 5 | 0 | 98.0 | 90 | 110 | | | |
| Nitrogen, Nitrite (As N) | 1.037 | mg/L | 0.10 | 1 | 0 | 104 | 90 | 110 | | | |
| Nitrogen, Nitrate (As N) | 2.468 | mg/L | 0.10 | 2.5 | 0 | 98.7 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P) | 5.053 | mg/L | 0.50 | 5 | 0 | 101 | 90 | 110 | | | |
| Sulfate | 9.884 | mg/L | 0.50 | 10 | 0 | 98.8 | 90 | 110 | | | |
| **Method: EPA Method 8015B: Diesel Range** | | | | | | | | | | | |
| **Sample ID: MB-24384** | | *MBLK* | | | | Batch ID: | **24384** | Analysis Date: | | 11/5/2010 8:59:17 AM | |
| Diesel Range Organics (DRO) | ND | mg/L | 1.0 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | mg/L | 5.0 | | | | | | | | |
| **Sample ID: LCS-24384** | | *LCS* | | | | Batch ID: | **24384** | Analysis Date: | | 11/5/2010 9:33:35 AM | |
| Diesel Range Organics (DRO) | 5.694 | mg/L | 1.0 | 5 | 0 | 114 | 74 | 157 | | | |
| **Sample ID: LCSD-24384** | | *LCSD* | | | | Batch ID: | **24384** | Analysis Date: | | 11/5/2010 10:08:30 AM | |
| Diesel Range Organics (DRO) | 5.501 | mg/L | 1.0 | 5 | 0 | 110 | 74 | 157 | 3.45 | 23 | |
| **Method: EPA Method 8015B: Gasoline Range** | | | | | | | | | | | |
| **Sample ID: 5ML RB** | | *MBLK* | | | | Batch ID: | **R41968** | Analysis Date: | | 11/4/2010 8:31:39 AM | |
| Gasoline Range Organics (GRO) | ND | mg/L | 0.050 | | | | | | | | |
| **Sample ID: 2.5UG GRO LCS** | | *LCS* | | | | Batch ID: | **R41968** | Analysis Date: | | 11/4/2010 7:24:05 PM | |
| Gasoline Range Organics (GRO) | 0.5586 | mg/L | 0.050 | 0.5 | 0 | 112 | 83.7 | 124 | | | |
| **Sample ID: 2.5UG GRO LCSD** | | *LCSD* | | | | Batch ID: | **R41968** | Analysis Date: | | 11/4/2010 7:53:03 PM | |
| Gasoline Range Organics (GRO) | 0.5238 | mg/L | 0.050 | 0.5 | 0 | 105 | 83.7 | 124 | 6.43 | 12 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** 2010 4th Qtr **Work Order:** 1011139

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260: Volatiles Short List** | | | | | | | | | | | |
| **Sample ID: 5ml rb** | | *MBLK* | | | | Batch ID: | **R41971** | Analysis Date: | 11/4/2010 10:14:30 AM | | |
| Benzene | ND | µg/L | 1.0 | | | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | µg/L | 1.0 | | | | | | | | |
| Naphthalene | ND | µg/L | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| Xylenes, Total | ND | µg/L | 2.0 | | | | | | | | |
| **Sample ID: 100ng lcs** | | *LCS* | | | | Batch ID: | **R41971** | Analysis Date: | 11/4/2010 11:09:36 AM | | |
| Benzene | 18.87 | µg/L | 1.0 | 20 | 0 | 94.4 | 84.6 | 109 | | | |
| Toluene | 21.61 | µg/L | 1.0 | 20 | 0 | 108 | 81 | 114 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** 2010 4th Qtr **Work Order:** 1011139

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: 1011139-01a msd** | | *MSD* | | | | Batch ID: | **R41971** | Analysis Date: | | 11/4/2010 3:17:10 PM | |
| Benzene | 24.81 | µg/L | 1.0 | 20 | 6.919 | 89.5 | 73.1 | 117 | 3.60 | 11.3 | |
| Toluene | 22.39 | µg/L | 1.0 | 20 | 2.309 | 100 | 82.9 | 109 | 8.68 | 11.6 | |
| Chlorobenzene | 20.01 | µg/L | 1.0 | 20 | 0 | 100 | 87.5 | 110 | 9.72 | 10.6 | |
| 1,1-Dichloroethene | 19.60 | µg/L | 1.0 | 20 | 0 | 98.0 | 66.2 | 131 | 0.444 | 14.4 | |
| Trichloroethene (TCE) | 12.08 | µg/L | 1.0 | 20 | 0 | 60.4 | 67.1 | 110 | 3.08 | 11.2 | S |
| **Sample ID: 5ml rb** | | *MBLK* | | | | Batch ID: | **R41971** | Analysis Date: | | 11/4/2010 10:14:30 AM | |
| Benzene | ND | µg/L | 1.0 | | | | | | | | |
| Toluene | ND | µg/L | 1.0 | | | | | | | | |
| Ethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | µg/L | 1.0 | | | | | | | | |
| Naphthalene | ND | µg/L | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 4.0 | | | | | | | | |
| Acetone | ND | µg/L | 10 | | | | | | | | |
| Bromobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Bromoform | ND | µg/L | 1.0 | | | | | | | | |
| Bromomethane | ND | µg/L | 3.0 | | | | | | | | |
| 2-Butanone | ND | µg/L | 10 | | | | | | | | |
| Carbon disulfide | ND | µg/L | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | µg/L | 1.0 | | | | | | | | |
| Chlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Chloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Chloroform | ND | µg/L | 1.0 | | | | | | | | |
| Chloromethane | ND | µg/L | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | µg/L | 1.0 | | | | | | | | |
| Dibromomethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | µg/L | 1.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** 2010 4th Qtr **Work Order:** 1011139

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8260B: VOLATILES** | | | | | | | | | | | |
| **Sample ID: 5ml rb** | | *MBLK* | | | | Batch ID: | **R41971** | Analysis Date: | 11/4/2010 10:14:30 AM | | |
| 2,2-Dichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | µg/L | 1.0 | | | | | | | | |
| 2-Hexanone | ND | µg/L | 10 | | | | | | | | |
| Isopropylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | µg/L | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | µg/L | 10 | | | | | | | | |
| Methylene Chloride | ND | µg/L | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| n-Propylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| Styrene | ND | µg/L | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | µg/L | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | µg/L | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | µg/L | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | µg/L | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | µg/L | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | µg/L | 2.0 | | | | | | | | |
| Vinyl chloride | ND | µg/L | 1.0 | | | | | | | | |
| Xylenes, Total | ND | µg/L | 1.5 | | | | | | | | |
| **Sample ID: 100ng lcs** | | *LCS* | | | | Batch ID: | **R41971** | Analysis Date: | 11/4/2010 11:09:36 AM | | |
| Benzene | 18.87 | µg/L | 1.0 | 20 | 0 | 94.4 | 84.6 | 109 | | | |
| Toluene | 21.61 | µg/L | 1.0 | 20 | 0 | 108 | 81 | 114 | | | |
| Chlorobenzene | 21.01 | µg/L | 1.0 | 20 | 0 | 105 | 85.2 | 113 | | | |
| 1,1-Dichloroethene | 20.98 | µg/L | 1.0 | 20 | 0 | 105 | 79.6 | 124 | | | |
| Trichloroethene (TCE) | 16.83 | µg/L | 1.0 | 20 | 0 | 84.2 | 78.3 | 102 | | | |
| **Sample ID: 1011139-01a ms** | | *MS* | | | | Batch ID: | **R41971** | Analysis Date: | 11/4/2010 2:49:38 PM | | |
| Benzene | 23.93 | µg/L | 1.0 | 20 | 6.919 | 85.1 | 73.1 | 117 | | | |
| Toluene | 20.52 | µg/L | 1.0 | 20 | 2.309 | 91.1 | 82.9 | 109 | | | |
| Chlorobenzene | 18.15 | µg/L | 1.0 | 20 | 0 | 90.8 | 87.5 | 110 | | | |
| 1,1-Dichloroethene | 19.51 | µg/L | 1.0 | 20 | 0 | 97.6 | 66.2 | 131 | | | |
| Trichloroethene (TCE) | 12.46 | µg/L | 1.0 | 20 | 0 | 62.3 | 67.1 | 110 | | | S |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** 2010 4th Qtr **Work Order:** 1011139

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8270C: Semivolatiles** | | | | | | | | | | | |
| **Sample ID: mb-24419** | | *MBLK* | | | | | Batch ID: **24419** | | Analysis Date: 11/10/2010 10:01:04 AM | | |
| Acenaphthene | ND | µg/L | 10 | | | | | | | | |
| Acenaphthylene | ND | µg/L | 10 | | | | | | | | |
| Aniline | ND | µg/L | 10 | | | | | | | | |
| Anthracene | ND | µg/L | 10 | | | | | | | | |
| Azobenzene | ND | µg/L | 10 | | | | | | | | |
| Benz(a)anthracene | ND | µg/L | 10 | | | | | | | | |
| Benzo(a)pyrene | ND | µg/L | 10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | µg/L | 10 | | | | | | | | |
| Benzo(g,h,i)perylene | ND | µg/L | 10 | | | | | | | | |
| Benzo(k)fluoranthene | ND | µg/L | 10 | | | | | | | | |
| Benzoic acid | ND | µg/L | 20 | | | | | | | | |
| Benzyl alcohol | ND | µg/L | 10 | | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | µg/L | 10 | | | | | | | | |
| Bis(2-chloroethyl)ether | ND | µg/L | 10 | | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | µg/L | 10 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | µg/L | 10 | | | | | | | | |
| 4-Bromophenyl phenyl ether | ND | µg/L | 10 | | | | | | | | |
| Butyl benzyl phthalate | ND | µg/L | 10 | | | | | | | | |
| Carbazole | ND | µg/L | 10 | | | | | | | | |
| 4-Chloro-3-methylphenol | ND | µg/L | 10 | | | | | | | | |
| 4-Chloroaniline | ND | µg/L | 10 | | | | | | | | |
| 2-Chloronaphthalene | ND | µg/L | 10 | | | | | | | | |
| 2-Chlorophenol | ND | µg/L | 10 | | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | µg/L | 10 | | | | | | | | |
| Chrysene | ND | µg/L | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | µg/L | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | µg/L | 10 | | | | | | | | |
| Dibenz(a,h)anthracene | ND | µg/L | 10 | | | | | | | | |
| Dibenzofuran | ND | µg/L | 10 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | µg/L | 5.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | µg/L | 10 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | µg/L | 5.0 | | | | | | | | |
| 3,3'-Dichlorobenzidine | ND | µg/L | 10 | | | | | | | | |
| Diethyl phthalate | ND | µg/L | 10 | | | | | | | | |
| Dimethyl phthalate | ND | µg/L | 10 | | | | | | | | |
| 2,4-Dichlorophenol | ND | µg/L | 20 | | | | | | | | |
| 2,4-Dimethylphenol | ND | µg/L | 10 | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | µg/L | 20 | | | | | | | | |
| 2,4-Dinitrophenol | ND | µg/L | 5.0 | | | | | | | | |
| 2,4-Dinitrotoluene | ND | µg/L | 5.0 | | | | | | | | |
| 2,6-Dinitrotoluene | ND | µg/L | 10 | | | | | | | | |
| Fluoranthene | ND | µg/L | 10 | | | | | | | | |
| Fluorene | ND | µg/L | 10 | | | | | | | | |
| Hexachlorobenzene | ND | µg/L | 5.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** 2010 4th Qtr **Work Order:** 1011139

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8270C: Semivolatiles** | | | | | | | | | | | |
| **Sample ID: mb-24419** | | *MBLK* | | | | Batch ID: | **24419** | Analysis Date: | 11/10/2010 10:01:04 AM | | |
| Hexachlorobutadiene | ND | µg/L | 10 | | | | | | | | |
| Hexachlorocyclopentadiene | ND | µg/L | 10 | | | | | | | | |
| Hexachloroethane | ND | µg/L | 5.0 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | µg/L | 10 | | | | | | | | |
| Isophorone | ND | µg/L | 10 | | | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 10 | | | | | | | | |
| 2-Methylphenol | ND | µg/L | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | µg/L | 5.0 | | | | | | | | |
| N-Nitrosodi-n-propylamine | ND | µg/L | 10 | | | | | | | | |
| N-Nitrosodimethylamine | ND | µg/L | 10 | | | | | | | | |
| N-Nitrosodiphenylamine | ND | µg/L | 10 | | | | | | | | |
| Naphthalene | ND | µg/L | 10 | | | | | | | | |
| 2-Nitroaniline | ND | µg/L | 10 | | | | | | | | |
| 3-Nitroaniline | ND | µg/L | 10 | | | | | | | | |
| 4-Nitroaniline | ND | µg/L | 10 | | | | | | | | |
| Nitrobenzene | ND | µg/L | 5.0 | | | | | | | | |
| 2-Nitrophenol | ND | µg/L | 10 | | | | | | | | |
| 4-Nitrophenol | ND | µg/L | 10 | | | | | | | | |
| Pentachlorophenol | ND | µg/L | 5.0 | | | | | | | | |
| Phenanthrene | ND | µg/L | 10 | | | | | | | | |
| Phenol | ND | µg/L | 10 | | | | | | | | |
| Pyrene | ND | µg/L | 10 | | | | | | | | |
| Pyridine | ND | µg/L | 5.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | µg/L | 10 | | | | | | | | |
| 2,4,5-Trichlorophenol | ND | µg/L | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | µg/L | 10 | | | | | | | | |
| **Sample ID: lcs-24419** | | *LCS* | | | | Batch ID: | **24419** | Analysis Date: | 11/10/2010 10:30:41 AM | | |
| Acenaphthene | 83.36 | µg/L | 10 | 100 | 0 | 83.4 | 31 | 99.4 | | | |
| 4-Chloro-3-methylphenol | 96.38 | µg/L | 10 | 100 | 0 | 96.4 | 34.3 | 111 | | | |
| 2-Chlorophenol | 89.28 | µg/L | 10 | 100 | 0 | 89.3 | 24.1 | 98.7 | | | |
| 1,4-Dichlorobenzene | 60.14 | µg/L | 10 | 100 | 0 | 60.1 | 20.6 | 85.6 | | | |
| 2,4-Dinitrotoluene | 93.84 | µg/L | 10 | 100 | 0 | 93.8 | 26.6 | 126 | | | |
| N-Nitrosodi-n-propylamine | 88.92 | µg/L | 10 | 100 | 0 | 88.9 | 29.2 | 94.4 | | | |
| 4-Nitrophenol | 57.20 | µg/L | 10 | 100 | 0 | 57.2 | 9.87 | 86 | | | |
| Pentachlorophenol | 86.02 | µg/L | 20 | 100 | 0 | 86.0 | 20 | 97.8 | | | |
| Phenol | 57.60 | µg/L | 10 | 100 | 0 | 57.6 | 17.5 | 60.5 | | | |
| Pyrene | 97.58 | µg/L | 10 | 100 | 0 | 97.6 | 46.8 | 92.2 | | | S |
| 1,2,4-Trichlorobenzene | 79.22 | µg/L | 10 | 100 | 0 | 79.2 | 25.2 | 92.3 | | | |
| **Sample ID: lcsd-24419** | | *LCSD* | | | | Batch ID: | **24419** | Analysis Date: | 11/10/2010 11:00:22 AM | | |
| Acenaphthene | 84.14 | µg/L | 10 | 100 | 0 | 84.1 | 31 | 99.4 | 0.931 | 30 | |
| 4-Chloro-3-methylphenol | 95.06 | µg/L | 10 | 100 | 0 | 95.1 | 34.3 | 111 | 1.38 | 30.8 | |
| 2-Chlorophenol | 96.30 | µg/L | 10 | 100 | 0 | 96.3 | 24.1 | 98.7 | 7.57 | 31 | |
| 1,4-Dichlorobenzene | 61.40 | µg/L | 10 | 100 | 0 | 61.4 | 20.6 | 85.6 | 2.07 | 37 | |
| 2,4-Dinitrotoluene | 93.00 | µg/L | 10 | 100 | 0 | 93.0 | 26.6 | 126 | 0.899 | 34.5 | |

**Qualifiers:**

E Estimated value
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
H Holding times for preparation or analysis exceeded
NC Non-Chlorinated
R RPD outside accepted recovery limits

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** 2010 4th Qtr
**Work Order:** 1011139

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8270C: Semivolatiles** | | | | | | | | | | | |
| **Sample ID: lcsd-24419** | | *LCSD* | | | | Batch ID: | **24419** | Analysis Date: | | 11/10/2010 11:00:22 AM | |
| N-Nitrosodi-n-propylamine | 92.20 | µg/L | 10 | 100 | 0 | 92.2 | 29.2 | 94.4 | 3.62 | 30.8 | |
| 4-Nitrophenol | 52.66 | µg/L | 10 | 100 | 0 | 52.7 | 9.87 | 86 | 8.27 | 61.1 | |
| Pentachlorophenol | 81.32 | µg/L | 20 | 100 | 0 | 81.3 | 20 | 97.8 | 5.62 | 64.8 | |
| Phenol | 60.22 | µg/L | 10 | 100 | 0 | 60.2 | 17.5 | 60.5 | 4.45 | 31.4 | |
| Pyrene | 97.92 | µg/L | 10 | 100 | 0 | 97.9 | 46.8 | 92.2 | 0.348 | 29.8 | S |
| 1,2,4-Trichlorobenzene | 76.08 | µg/L | 10 | 100 | 0 | 76.1 | 25.2 | 92.3 | 4.04 | 30.9 | |
| **Method: EPA Method 7470: Mercury** | | | | | | | | | | | |
| **Sample ID: MB-24457** | | *MBLK* | | | | Batch ID: | **24457** | Analysis Date: | | 11/10/2010 12:27:25 PM | |
| Mercury | ND | mg/L | 0.00020 | | | | | | | | |
| **Sample ID: LCS-24457** | | *LCS* | | | | Batch ID: | **24457** | Analysis Date: | | 11/10/2010 12:29:10 PM | |
| Mercury | 0.005033 | mg/L | 0.00020 | 0.005 | 0 | 101 | 80 | 120 | | | |
| **Sample ID: LCS-24457** | | *LCS* | | | | Batch ID: | **24457** | Analysis Date: | | 11/11/2010 9:25:21 AM | |
| Mercury | 0.004998 | mg/L | 0.00020 | 0.005 | 0 | 100 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** 2010 4th Qtr **Work Order:** 1011139

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 6010B: Dissolved Metals** | | | | | | | | | | | |
| **Sample ID: 1011139-05DMSD** | | *MSD* | | | | Batch ID: | **R42135** | Analysis Date: | | 11/14/2010 12:56:59 PM | |
| Barium | 0.6132 | mg/L | 0.020 | 0.5 | 0.1256 | 97.5 | 75 | 125 | 4.32 | 20 | |
| Cadmium | 0.5136 | mg/L | 0.0020 | 0.5 | 0 | 103 | 75 | 125 | 4.64 | 20 | |
| Chromium | 0.5058 | mg/L | 0.0060 | 0.5 | 0 | 101 | 75 | 125 | 4.53 | 20 | |
| Copper | 0.5380 | mg/L | 0.0060 | 0.5 | 0 | 108 | 75 | 125 | 4.77 | 20 | |
| Lead | 0.4927 | mg/L | 0.0050 | 0.5 | 0 | 98.5 | 75 | 125 | 3.96 | 20 | |
| Manganese | 0.5077 | mg/L | 0.0020 | 0.5 | 0.0157 | 98.4 | 75 | 125 | 4.50 | 20 | |
| Silver | 0.4791 | mg/L | 0.0050 | 0.5 | 0 | 95.8 | 75 | 125 | 4.15 | 20 | |
| **Sample ID: 1011139-05DMSD** | | *MSD* | | | | Batch ID: | **R42135** | Analysis Date: | | 11/14/2010 1:34:51 PM | |
| Arsenic | 2.824 | mg/L | 0.10 | 2.5 | 0 | 113 | 75 | 125 | 1.89 | 20 | |
| Calcium | 342.5 | mg/L | 5.0 | 252.5 | 74.85 | 106 | 75 | 125 | 2.38 | 20 | |
| Magnesium | 282.6 | mg/L | 5.0 | 252.5 | 14.24 | 106 | 75 | 125 | 3.60 | 20 | |
| Potassium | 286.1 | mg/L | 5.0 | 275 | 1.394 | 104 | 75 | 125 | 2.58 | 20 | |
| Selenium | 2.832 | mg/L | 0.25 | 2.5 | 0 | 113 | 75 | 125 | 0.895 | 20 | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R42135** | Analysis Date: | | 11/14/2010 10:56:35 AM | |
| Arsenic | ND | mg/L | 0.020 | | | | | | | | |
| Barium | ND | mg/L | 0.020 | | | | | | | | |
| Cadmium | ND | mg/L | 0.0020 | | | | | | | | |
| Calcium | ND | mg/L | 1.0 | | | | | | | | |
| Chromium | ND | mg/L | 0.0060 | | | | | | | | |
| Copper | ND | mg/L | 0.0060 | | | | | | | | |
| Iron | ND | mg/L | 0.020 | | | | | | | | |
| Lead | ND | mg/L | 0.0050 | | | | | | | | |
| Magnesium | ND | mg/L | 1.0 | | | | | | | | |
| Manganese | ND | mg/L | 0.0020 | | | | | | | | |
| Potassium | ND | mg/L | 1.0 | | | | | | | | |
| Selenium | ND | mg/L | 0.050 | | | | | | | | |
| Silver | ND | mg/L | 0.0050 | | | | | | | | |
| Sodium | ND | mg/L | 1.0 | | | | | | | | |
| **Sample ID: MB** | | *MBLK* | | | | Batch ID: | **R42210** | Analysis Date: | | 11/17/2010 5:58:09 PM | |
| Arsenic | ND | mg/L | 0.020 | | | | | | | | |
| Barium | ND | mg/L | 0.020 | | | | | | | | |
| Cadmium | ND | mg/L | 0.0020 | | | | | | | | |
| Calcium | ND | mg/L | 1.0 | | | | | | | | |
| Chromium | ND | mg/L | 0.0060 | | | | | | | | |
| Copper | ND | mg/L | 0.0060 | | | | | | | | |
| Iron | ND | mg/L | 0.020 | | | | | | | | |
| Lead | ND | mg/L | 0.0050 | | | | | | | | |
| Magnesium | ND | mg/L | 1.0 | | | | | | | | |
| Manganese | ND | mg/L | 0.0020 | | | | | | | | |
| Potassium | ND | mg/L | 1.0 | | | | | | | | |
| Selenium | ND | mg/L | 0.050 | | | | | | | | |
| Silver | ND | mg/L | 0.0050 | | | | | | | | |
| Sodium | ND | mg/L | 1.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** 2010 4th Qtr **Work Order:** 1011139

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 6010B: Dissolved Metals** | | | | | | | | | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R42135** | Analysis Date: | 11/14/2010 10:59:35 AM | | |
| Arsenic | 0.5359 | mg/L | 0.020 | 0.5 | 0 | 107 | 80 | 120 | | | |
| Barium | 0.5015 | mg/L | 0.020 | 0.5 | 0 | 100 | 80 | 120 | | | |
| Cadmium | 0.5194 | mg/L | 0.0020 | 0.5 | 0 | 104 | 80 | 120 | | | |
| Calcium | 51.65 | mg/L | 1.0 | 50.5 | 0 | 102 | 80 | 120 | | | |
| Chromium | 0.5074 | mg/L | 0.0060 | 0.5 | 0 | 101 | 80 | 120 | | | |
| Copper | 0.5246 | mg/L | 0.0060 | 0.5 | 0 | 105 | 80 | 120 | | | |
| Iron | 0.5149 | mg/L | 0.020 | 0.5 | 0.0138 | 100 | 80 | 120 | | | |
| Lead | 0.5109 | mg/L | 0.0050 | 0.5 | 0 | 102 | 80 | 120 | | | |
| Magnesium | 51.70 | mg/L | 1.0 | 50.5 | 0 | 102 | 80 | 120 | | | |
| Manganese | 0.4963 | mg/L | 0.0020 | 0.5 | 0 | 99.3 | 80 | 120 | | | |
| Potassium | 53.32 | mg/L | 1.0 | 55 | 0 | 96.9 | 80 | 120 | | | |
| Selenium | 0.5184 | mg/L | 0.050 | 0.5 | 0 | 104 | 80 | 120 | | | |
| Silver | 0.5046 | mg/L | 0.0050 | 0.5 | 0 | 101 | 80 | 120 | | | |
| Sodium | 49.87 | mg/L | 1.0 | 50.5 | 0.0415 | 98.7 | 80 | 120 | | | |
| **Sample ID: LCS** | | *LCS* | | | | Batch ID: | **R42210** | Analysis Date: | 11/17/2010 6:01:15 PM | | |
| Arsenic | 0.5089 | mg/L | 0.020 | 0.5 | 0 | 102 | 80 | 120 | | | |
| Barium | 0.4912 | mg/L | 0.020 | 0.5 | 0 | 98.2 | 80 | 120 | | | |
| Cadmium | 0.5086 | mg/L | 0.0020 | 0.5 | 0 | 102 | 80 | 120 | | | |
| Calcium | 50.93 | mg/L | 1.0 | 50.5 | 0 | 101 | 80 | 120 | | | |
| Chromium | 0.5014 | mg/L | 0.0060 | 0.5 | 0 | 100 | 80 | 120 | | | |
| Copper | 0.5333 | mg/L | 0.0060 | 0.5 | 0 | 107 | 80 | 120 | | | |
| Iron | 0.4816 | mg/L | 0.020 | 0.5 | 0 | 96.3 | 80 | 120 | | | |
| Lead | 0.4936 | mg/L | 0.0050 | 0.5 | 0 | 98.7 | 80 | 120 | | | |
| Magnesium | 51.90 | mg/L | 1.0 | 50.5 | 0 | 103 | 80 | 120 | | | |
| Manganese | 0.4908 | mg/L | 0.0020 | 0.5 | 0 | 98.2 | 80 | 120 | | | |
| Potassium | 55.12 | mg/L | 1.0 | 55 | 0 | 100 | 80 | 120 | | | |
| Selenium | 0.5045 | mg/L | 0.050 | 0.5 | 0 | 101 | 80 | 120 | | | |
| Silver | 0.5163 | mg/L | 0.0050 | 0.5 | 0 | 103 | 80 | 120 | | | |
| Sodium | 51.21 | mg/L | 1.0 | 50.5 | 0 | 101 | 80 | 120 | | | |
| **Sample ID: 1011139-05DMS** | | *MS* | | | | Batch ID: | **R42135** | Analysis Date: | 11/14/2010 12:52:51 PM | | |
| Barium | 0.6402 | mg/L | 0.020 | 0.5 | 0.1256 | 103 | 75 | 125 | | | |
| Cadmium | 0.5380 | mg/L | 0.0020 | 0.5 | 0 | 108 | 75 | 125 | | | |
| Chromium | 0.5292 | mg/L | 0.0060 | 0.5 | 0 | 106 | 75 | 125 | | | |
| Copper | 0.5643 | mg/L | 0.0060 | 0.5 | 0 | 113 | 75 | 125 | | | |
| Lead | 0.5126 | mg/L | 0.0050 | 0.5 | 0 | 103 | 75 | 125 | | | |
| Manganese | 0.5310 | mg/L | 0.0020 | 0.5 | 0.0157 | 103 | 75 | 125 | | | |
| Silver | 0.4994 | mg/L | 0.0050 | 0.5 | 0 | 99.9 | 75 | 125 | | | |
| **Sample ID: 1011139-05DMS** | | *MS* | | | | Batch ID: | **R42135** | Analysis Date: | 11/14/2010 1:31:46 PM | | |
| Arsenic | 2.878 | mg/L | 0.10 | 2.5 | 0 | 115 | 75 | 125 | | | |
| Calcium | 334.5 | mg/L | 5.0 | 252.5 | 74.85 | 103 | 75 | 125 | | | |
| Magnesium | 272.6 | mg/L | 5.0 | 252.5 | 14.24 | 102 | 75 | 125 | | | |
| Potassium | 278.8 | mg/L | 5.0 | 275 | 1.394 | 101 | 75 | 125 | | | |
| Selenium | 2.807 | mg/L | 0.25 | 2.5 | 0 | 112 | 75 | 125 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** 2010 4th Qtr **Work Order:** 1011139

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA 6010B: Total Recoverable Metals** | | | | | | | | | | | |
| **Sample ID: MB-24431** | | *MBLK* | | | | Batch ID: | **24431** | Analysis Date: | 11/9/2010 11:16:06 AM | | |
| Arsenic | ND | mg/L | 0.020 | | | | | | | | |
| Barium | ND | mg/L | 0.020 | | | | | | | | |
| Cadmium | ND | mg/L | 0.0020 | | | | | | | | |
| Chromium | ND | mg/L | 0.0060 | | | | | | | | |
| Copper | ND | mg/L | 0.0060 | | | | | | | | |
| Iron | ND | mg/L | 0.050 | | | | | | | | |
| Lead | ND | mg/L | 0.0050 | | | | | | | | |
| Manganese | ND | mg/L | 0.0020 | | | | | | | | |
| Selenium | ND | mg/L | 0.050 | | | | | | | | |
| Silver | ND | mg/L | 0.0050 | | | | | | | | |
| Zinc | ND | mg/L | 0.020 | | | | | | | | |
| **Sample ID: LCS-24431** | | *LCS* | | | | Batch ID: | **24431** | Analysis Date: | 11/9/2010 11:19:20 AM | | |
| Arsenic | 0.5346 | mg/L | 0.020 | 0.5 | 0 | 107 | 80 | 120 | | | |
| Barium | 0.4941 | mg/L | 0.020 | 0.5 | 0 | 98.8 | 80 | 120 | | | |
| Cadmium | 0.5132 | mg/L | 0.0020 | 0.5 | 0 | 103 | 80 | 120 | | | |
| Chromium | 0.5051 | mg/L | 0.0060 | 0.5 | 0 | 101 | 80 | 120 | | | |
| Copper | 0.5361 | mg/L | 0.0060 | 0.5 | 0 | 107 | 80 | 120 | | | |
| Iron | 0.5126 | mg/L | 0.050 | 0.5 | 0 | 103 | 80 | 120 | | | |
| Lead | 0.5035 | mg/L | 0.0050 | 0.5 | 0 | 101 | 80 | 120 | | | |
| Manganese | 0.4922 | mg/L | 0.0020 | 0.5 | 0.0001 | 98.4 | 80 | 120 | | | |
| Selenium | 0.5117 | mg/L | 0.050 | 0.5 | 0 | 102 | 80 | 120 | | | |
| Silver | 0.5110 | mg/L | 0.0050 | 0.5 | 0 | 102 | 80 | 120 | | | |
| Zinc | 0.5053 | mg/L | 0.020 | 0.5 | 0 | 101 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name WESTERN REFINING GALLU

Date Received: 11/3/2010

Work Order Number 1011139

Received by: AMF

Sample ID labels checked by: CMS
Initials

Checklist completed by: [signature] 11/3/10
Signature Date

Matrix: Carrier name Client drop-off

| | | | | |
|---|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ | |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☐ | Not Shipped ☑ |
| Custody seals intact on sample bottles? | Yes ☑ | No ☐ | N/A ☐ | |
| Chain of custody present? | Yes ☑ | No ☐ | | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | | |
| Sample containers intact? | Yes ☑ | No ☐ | | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | | |
| All samples received within holding time? | Yes ☑ | No ☐ | | Number of preserved bottles checked for pH: |
| Water - VOA vials have zero headspace? | No VOA vials submitted ☐ | Yes ☑ | No ☐ | |
| Water - Preservation labels on bottle and cap match? | Yes ☑ | No ☐ | N/A ☐ | |
| Water - pH acceptable upon receipt? | Yes ☑ | No ☐ | N/A ☐ | *<2 >12 unless noted below.* |
| Container/Temp Blank temperature? | **2.9°** | *<6° C Acceptable* If given sufficient time to cool. | | |

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

# Chain-of-Custody Record

Client: Western Refining
Rt 3 Bx 7
Mailing Address: Gallup NM

Phone #: 505 722 3833
email or Fax#: 505 722-0210

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

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: 4th QTR

Project #: NAPIS + GWM-1

Project Manager: C Johnson

Sampler: C Johnson

On Ice: [redacted]

Sample Temperature: [redacted]

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

**Analysis Request**

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | [redacted] | BTEX + MTBE + TMB's (8021B) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions (F,Cl,$NO_3$,$NO_2$,$PO_4$,$SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) + MTBE | 8270 (Semi-VOA) | WQCC Metals - Total | WQCC Metals - Diss | Major Cations, Anions | 8021B + MTBE | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/2/10 | 0900 | WTR | Field Blank | | | -6 | | | | | | | | | | X | | | | | | |
| | 0910 | WTR | GWM-1 | | | 1011139-1 | | | X | | | | | | | X | | X | X | X | | |
| | 01015 | \| | NAPIS-2 | | | -2 | | | \| | | | | | | | | X | \| | \| | \| | X | |
| | 1109 | \| | KA-3 | | | -3 | | | \| | | | | | | | | \| | \| | \| | \| | \| | |
| | 1204 | \| | NAPIS-3 | | | -4 | | | \| | | | | | | | | \| | \| | \| | \| | \| | |
| | 1505 | \| | NAPIS-1 | | | -5 | | | \| | | | | | | | | \| | \| | \| | \| | \| | |
| | | | TRIP Blank | | | -7 | | | | | | | | | | X | | | | | | |

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 11/2/10 | 1410 | | Grant Price | 11/2/10 | 1410 |
| 11/3/10 | 9:25 | | | 11/3/10 | 9:25 |

Remarks:

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

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

# COVER LETTER

Saturday, November 13, 2010

Cheryl Johnson
Western Refining Southwest, Gallup
Rt. 3 Box 7
Gallup, NM 87301

TEL: (505) 722-0231
FAX (505) 722-0210

RE: Resample

Order No.: 1011030

Dear Cheryl Johnson:

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 11/1/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901
AZ license # AZ0682
ORELAP Lab # NM100001
Texas Lab# T104704424-08-TX

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011030
**Project:** Resample
**Lab ID:** 1011030-01

**Client Sample ID:** PW-3
**Collection Date:** 11/1/2010 8:00:00 AM
**Date Received:** 11/1/2010
**Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: JDC |
| Acenaphthene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Acenaphthylene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Aniline | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Azobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Benz(a)anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Benzo(a)pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Benzo(b)fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Benzo(g,h,i)perylene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Benzo(k)fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Benzoic acid | ND | 20 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Benzyl alcohol | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Bis(2-chloroethoxy)methane | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Bis(2-chloroethyl)ether | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Bis(2-chloroisopropyl)ether | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 4-Bromophenyl phenyl ether | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Butyl benzyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Carbazole | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 4-Chloro-3-methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 4-Chloroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2-Chloronaphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2-Chlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 4-Chlorophenyl phenyl ether | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Chrysene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Di-n-butyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Di-n-octyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Dibenz(a,h)anthracene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Dibenzofuran | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 1,2-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 1,3-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 1,4-Dichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 3,3'-Dichlorobenzidine | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Diethyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Dimethyl phthalate | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2,4-Dichlorophenol | ND | 20 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2,4-Dimethylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 4,6-Dinitro-2-methylphenol | ND | 20 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2,4-Dinitrophenol | ND | 20 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2,4-Dinitrotoluene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2,6-Dinitrotoluene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level | B | Analyte detected in the associated Method Blank |
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | MCL | Maximum Contaminant Level |
| NC | Non-Chlorinated | ND | Not Detected at the Reporting Limit |
| PQL | Practical Quantitation Limit | S | Spike recovery outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

**Date:** *13-Nov-10*

**CLIENT:** Western Refining Southwest, Gallup
**Lab Order:** 1011030
**Project:** Resample
**Lab ID:** 1011030-01

**Client Sample ID:** PW-3
**Collection Date:** 11/1/2010 8:00:00 AM
**Date Received:** 11/1/2010
**Matrix:** AQUEOUS

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|
| **EPA METHOD 8270C: SEMIVOLATILES** | | | | | | Analyst: JDC |
| Fluoranthene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Fluorene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Hexachlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Hexachlorobutadiene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Hexachlorocyclopentadiene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Hexachloroethane | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Isophorone | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2-Methylnaphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2-Methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 3+4-Methylphenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| N-Nitrosodi-n-propylamine | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| N-Nitrosodimethylamine | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| N-Nitrosodiphenylamine | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Naphthalene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2-Nitroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 3-Nitroaniline | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 4-Nitroaniline | ND | 20 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Nitrobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2-Nitrophenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 4-Nitrophenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Pentachlorophenol | ND | 20 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Phenanthrene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Phenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Pyrene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Pyridine | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 1,2,4-Trichlorobenzene | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2,4,5-Trichlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| 2,4,6-Trichlorophenol | ND | 10 | | µg/L | 1 | 11/10/2010 11:30:07 AM |
| Surr: 2,4,6-Tribromophenol | 70.2 | 17.5-104 | | %REC | 1 | 11/10/2010 11:30:07 AM |
| Surr: 2-Fluorobiphenyl | 77.3 | 30.9-98.9 | | %REC | 1 | 11/10/2010 11:30:07 AM |
| Surr: 2-Fluorophenol | 66.2 | 12.4-90.1 | | %REC | 1 | 11/10/2010 11:30:07 AM |
| Surr: 4-Terphenyl-d14 | 75.9 | 43.5-91.9 | | %REC | 1 | 11/10/2010 11:30:07 AM |
| Surr: Nitrobenzene-d5 | 89.9 | 26.2-108 | | %REC | 1 | 11/10/2010 11:30:07 AM |
| Surr: Phenol-d5 | 46.3 | 11.8-73.1 | | %REC | 1 | 11/10/2010 11:30:07 AM |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** Resample

**Work Order:** 1011030

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8270C: Semivolatiles** | | | | | | | | | | | |
| **Sample ID: mb-24419** | | *MBLK* | | | | | Batch ID: **24419** | | Analysis Date: 11/10/2010 10:01:04 AM | | |
| Acenaphthene | ND | µg/L | 10 | | | | | | | | |
| Acenaphthylene | ND | µg/L | 10 | | | | | | | | |
| Aniline | ND | µg/L | 10 | | | | | | | | |
| Anthracene | ND | µg/L | 10 | | | | | | | | |
| Azobenzene | ND | µg/L | 10 | | | | | | | | |
| Benz(a)anthracene | ND | µg/L | 10 | | | | | | | | |
| Benzo(a)pyrene | ND | µg/L | 10 | | | | | | | | |
| Benzo(b)fluoranthene | ND | µg/L | 10 | | | | | | | | |
| Benzo(g,h,i)perylene | ND | µg/L | 10 | | | | | | | | |
| Benzo(k)fluoranthene | ND | µg/L | 10 | | | | | | | | |
| Benzoic acid | ND | µg/L | 20 | | | | | | | | |
| Benzyl alcohol | ND | µg/L | 10 | | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | µg/L | 10 | | | | | | | | |
| Bis(2-chloroethyl)ether | ND | µg/L | 10 | | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | µg/L | 10 | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | µg/L | 10 | | | | | | | | |
| 4-Bromophenyl phenyl ether | ND | µg/L | 10 | | | | | | | | |
| Butyl benzyl phthalate | ND | µg/L | 10 | | | | | | | | |
| Carbazole | ND | µg/L | 10 | | | | | | | | |
| 4-Chloro-3-methylphenol | ND | µg/L | 10 | | | | | | | | |
| 4-Chloroaniline | ND | µg/L | 10 | | | | | | | | |
| 2-Chloronaphthalene | ND | µg/L | 10 | | | | | | | | |
| 2-Chlorophenol | ND | µg/L | 10 | | | | | | | | |
| 4-Chlorophenyl phenyl ether | ND | µg/L | 10 | | | | | | | | |
| Chrysene | ND | µg/L | 10 | | | | | | | | |
| Di-n-butyl phthalate | ND | µg/L | 10 | | | | | | | | |
| Di-n-octyl phthalate | ND | µg/L | 10 | | | | | | | | |
| Dibenz(a,h)anthracene | ND | µg/L | 10 | | | | | | | | |
| Dibenzofuran | ND | µg/L | 10 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | µg/L | 5.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | µg/L | 10 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | µg/L | 5.0 | | | | | | | | |
| 3,3'-Dichlorobenzidine | ND | µg/L | 10 | | | | | | | | |
| Diethyl phthalate | ND | µg/L | 10 | | | | | | | | |
| Dimethyl phthalate | ND | µg/L | 10 | | | | | | | | |
| 2,4-Dichlorophenol | ND | µg/L | 20 | | | | | | | | |
| 2,4-Dimethylphenol | ND | µg/L | 10 | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | µg/L | 20 | | | | | | | | |
| 2,4-Dinitrophenol | ND | µg/L | 5.0 | | | | | | | | |
| 2,4-Dinitrotoluene | ND | µg/L | 5.0 | | | | | | | | |
| 2,6-Dinitrotoluene | ND | µg/L | 10 | | | | | | | | |
| Fluoranthene | ND | µg/L | 10 | | | | | | | | |
| Fluorene | ND | µg/L | 10 | | | | | | | | |
| Hexachlorobenzene | ND | µg/L | 5.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** Resample **Work Order:** 1011030

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8270C: Semivolatiles** | | | | | | | | | | | |
| **Sample ID: mb-24419** | | *MBLK* | | | | Batch ID: | **24419** | Analysis Date: | 11/10/2010 10:01:04 AM | | |
| Hexachlorobutadiene | ND | µg/L | 10 | | | | | | | | |
| Hexachlorocyclopentadiene | ND | µg/L | 10 | | | | | | | | |
| Hexachloroethane | ND | µg/L | 5.0 | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | µg/L | 10 | | | | | | | | |
| Isophorone | ND | µg/L | 10 | | | | | | | | |
| 2-Methylnaphthalene | ND | µg/L | 10 | | | | | | | | |
| 2-Methylphenol | ND | µg/L | 5.0 | | | | | | | | |
| 3+4-Methylphenol | ND | µg/L | 5.0 | | | | | | | | |
| N-Nitrosodi-n-propylamine | ND | µg/L | 10 | | | | | | | | |
| N-Nitrosodimethylamine | ND | µg/L | 10 | | | | | | | | |
| N-Nitrosodiphenylamine | ND | µg/L | 10 | | | | | | | | |
| Naphthalene | ND | µg/L | 10 | | | | | | | | |
| 2-Nitroaniline | ND | µg/L | 10 | | | | | | | | |
| 3-Nitroaniline | ND | µg/L | 10 | | | | | | | | |
| 4-Nitroaniline | ND | µg/L | 10 | | | | | | | | |
| Nitrobenzene | ND | µg/L | 5.0 | | | | | | | | |
| 2-Nitrophenol | ND | µg/L | 10 | | | | | | | | |
| 4-Nitrophenol | ND | µg/L | 10 | | | | | | | | |
| Pentachlorophenol | ND | µg/L | 5.0 | | | | | | | | |
| Phenanthrene | ND | µg/L | 10 | | | | | | | | |
| Phenol | ND | µg/L | 10 | | | | | | | | |
| Pyrene | ND | µg/L | 10 | | | | | | | | |
| Pyridine | ND | µg/L | 5.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | µg/L | 10 | | | | | | | | |
| 2,4,5-Trichlorophenol | ND | µg/L | 10 | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | µg/L | 10 | | | | | | | | |
| **Sample ID: lcs-24419** | | *LCS* | | | | Batch ID: | **24419** | Analysis Date: | 11/10/2010 10:30:41 AM | | |
| Acenaphthene | 83.36 | µg/L | 10 | 100 | 0 | 83.4 | 31 | 99.4 | | | |
| 4-Chloro-3-methylphenol | 96.38 | µg/L | 10 | 100 | 0 | 96.4 | 34.3 | 111 | | | |
| 2-Chlorophenol | 89.28 | µg/L | 10 | 100 | 0 | 89.3 | 24.1 | 98.7 | | | |
| 1,4-Dichlorobenzene | 60.14 | µg/L | 10 | 100 | 0 | 60.1 | 20.6 | 85.6 | | | |
| 2,4-Dinitrotoluene | 93.84 | µg/L | 10 | 100 | 0 | 93.8 | 26.6 | 126 | | | |
| N-Nitrosodi-n-propylamine | 88.92 | µg/L | 10 | 100 | 0 | 88.9 | 29.2 | 94.4 | | | |
| 4-Nitrophenol | 57.20 | µg/L | 10 | 100 | 0 | 57.2 | 9.87 | 86 | | | |
| Pentachlorophenol | 86.02 | µg/L | 20 | 100 | 0 | 86.0 | 20 | 97.8 | | | |
| Phenol | 57.60 | µg/L | 10 | 100 | 0 | 57.6 | 17.5 | 60.5 | | | |
| Pyrene | 97.58 | µg/L | 10 | 100 | 0 | 97.6 | 46.8 | 92.2 | | | S |
| 1,2,4-Trichlorobenzene | 79.22 | µg/L | 10 | 100 | 0 | 79.2 | 25.2 | 92.3 | | | |
| **Sample ID: lcsd-24419** | | *LCSD* | | | | Batch ID: | **24419** | Analysis Date: | 11/10/2010 11:00:22 AM | | |
| Acenaphthene | 84.14 | µg/L | 10 | 100 | 0 | 84.1 | 31 | 99.4 | 0.931 | 30 | |
| 4-Chloro-3-methylphenol | 95.06 | µg/L | 10 | 100 | 0 | 95.1 | 34.3 | 111 | 1.38 | 30.8 | |
| 2-Chlorophenol | 96.30 | µg/L | 10 | 100 | 0 | 96.3 | 24.1 | 98.7 | 7.57 | 31 | |
| 1,4-Dichlorobenzene | 61.40 | µg/L | 10 | 100 | 0 | 61.4 | 20.6 | 85.6 | 2.07 | 37 | |
| 2,4-Dinitrotoluene | 93.00 | µg/L | 10 | 100 | 0 | 93.0 | 26.6 | 126 | 0.899 | 34.5 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# QA/QC SUMMARY REPORT

**Client:** Western Refining Southwest, Gallup
**Project:** Resample **Work Order:** 1011030

| Analyte | Result | Units | PQL | SPK Va | SPK ref | %Rec | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Method: EPA Method 8270C: Semivolatiles** | | | | | | | | | | | |
| **Sample ID: lcsd-24419** | | *LCSD* | | | | Batch ID: | **24419** | Analysis Date: | | 11/10/2010 11:00:22 AM | |
| N-Nitrosodi-n-propylamine | 92.20 | µg/L | 10 | 100 | 0 | 92.2 | 29.2 | 94.4 | 3.62 | 30.8 | |
| 4-Nitrophenol | 52.66 | µg/L | 10 | 100 | 0 | 52.7 | 9.87 | 86 | 8.27 | 61.1 | |
| Pentachlorophenol | 81.32 | µg/L | 20 | 100 | 0 | 81.3 | 20 | 97.8 | 5.62 | 64.8 | |
| Phenol | 60.22 | µg/L | 10 | 100 | 0 | 60.2 | 17.5 | 60.5 | 4.45 | 31.4 | |
| Pyrene | 97.92 | µg/L | 10 | 100 | 0 | 97.9 | 46.8 | 92.2 | 0.348 | 29.8 | S |
| 1,2,4-Trichlorobenzene | 76.08 | µg/L | 10 | 100 | 0 | 76.1 | 25.2 | 92.3 | 4.04 | 30.9 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| E | Estimated value | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits | NC | Non-Chlorinated |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits |

# Hall Environmental Analysis Laboratory, Inc.

## Sample Receipt Checklist

Client Name WESTERN REFINING GALLU

Date Received: 11/1/2010

Work Order Number 1011030

Received by: AMG

Sample ID labels checked by: KMS (Initials)

Checklist completed by: (Signature) 11/1/10 (Date)

Matrix:

Carrier name: Client drop-off

| | | | | |
|---|---|---|---|---|
| Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ | |
| Custody seals intact on shipping container/cooler? | Yes ☐ | No ☐ | Not Present ☐ | Not Shipped ☑ |
| Custody seals intact on sample bottles? | Yes ☑ | No ☐ | N/A ☐ | |
| Chain of custody present? | Yes ☑ | No ☐ | | |
| Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | | |
| Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | | |
| Samples in proper container/bottle? | Yes ☑ | No ☐ | | |
| Sample containers intact? | Yes ☑ | No ☐ | | |
| Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | | |
| All samples received within holding time? | Yes ☑ | No ☐ | | Number of preserved bottles checked for pH: |
| Water - VOA vials have zero headspace? | No VOA vials submitted ☑ | Yes ☐ | No ☐ | |
| Water - Preservation labels on bottle and cap match? | Yes ☐ | No ☐ | N/A ☑ | |
| Water - pH acceptable upon receipt? | Yes ☐ | No ☐ | N/A ☑ | *<2 >12 unless noted below.* |
| Container/Temp Blank temperature? | **1.0°** | *<6° C Acceptable* If given sufficient time to cool. | | |

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

# Chain-of-Custody Record

Client: Western Refining Gallup Refinery

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)
- ☐ Other _____
- ☐ EDD (Type) _____

Turn-Around Time:
- ☒ Standard
- ☐ Rush _____

Project Name: Resample

Project #: PW-3

Project Manager: Cheryl Johnson

Sampler: C Johnson

On Ice: ☒ Yes ☐ No

Sample Temperature: 4°C

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

**Analysis Request**

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions (F,Cl,$NO_3$,$NO_2$,$PO_4$,$SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11/1/10 | 0800 | WTR | PW-3 | | | -1 | | | | | | | | | | | X | | | | | |

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 11/1/10 | 0830 | | | 11-1-10 | 0830 |
| 11-1-10 | 1200 | | | 11/1/10 | 1300 |

Remarks:

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